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Cover: *Sketch for Parietal Architecture* by Bernard Trey.  
See page 23.

# arts & architecture

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## LETTERS TO THE EDITOR

Dear Sir:

In the September issue of *Arts & Architecture* I find a richly illustrated article about advertising structures. It contains a sentence "the major offense of billboards has always been their ugliness." I wish to submit that this has not been at any time the major offense of billboards.

*The major offense of billboards is their existence.* Even a billboard depicting a reproduction of the Mona Lisa is essentially just as offensive as the one displaying a piece of cheese cake. The troubles of the billboard are inherent in the fact that in order to be effective they have to distract our eyes and our attention from those matters to which we would like them to be attracted to or from those matters to which they should be attracted to and instead attracts them to a commercial message. When we would like to see landscape, they make us look at York filter cigarettes or Seagram's extra dry gin. When we should be paying attention to traffic, they try to persuade us to look at the beauties of Forest Lawn, which might be quite apropos, because that is where we may end just because we are distracted from watching the road.

There are in my conviction new approaches and new methods open to the worried billboard industry, but they certainly do not lie in the direction of the illustrations shown on the pages of your publication, which would make billboards even more distracting because they are more cleverly designed than they already are.

There would be a wide field of activity for the billboard industry if they could become interested in the idea of appealing to the potential customer when he walks and not when he drives. When that idea is accepted, the gigantic scale needed in order to confuse or distract the driver can be done away with. Messages on or near eye level can be smaller and more subtle. One of the arts which has been lost in our country, but is flourishing in European countries, namely the art of poster design, could be reborn.

Victor Gruen, Architect, F.A.I.A.

Dear Sir:

As a reader who has long respected *Arts & Architecture* for its lonely fight against commercialism as the primary determinant of our designed environment, I was disappointed to say the least by the article on billboards in the September issue. Have you at long last capitulated? Or is it just incredible naiveté that prompts you to see this insignificant design effort as a harbinger of a "total redesign of outdoor graphics"?

A. M. Gokul, Architect  
Coos Bay, Oregon

*Neither. Nor do we accept your characterization of the designs as insignificant, although their primary significance may not be the designs themselves but the effort. Movements to abolish outdoor advertising (or any other kind) have a history of failure. In your own state for example, legislation which would have outlawed billboards got as far as the ballot, but there it was defeated decisively by popular vote. Ross Barrett, president of Foster and Kleiser, noted revenue is up 5 percent over last year. Furthermore, he said he believes without a doubt that the industry's position is so secure that even if nothing were done to improve the structures, there would be no appreciable change in the picture between now and his retirement. And Barrett is a long way from retirement age. This is so, he said, because opponents of billboards tend to the extreme. They will settle for nothing less than complete abolition. We were impressed by his words and by Barrett's unmistakable sincerity. He is meeting with resistance from others in the outdoor advertising industry who would prefer to sit on the status quo but feels sure it can be overcome if only architects and others in the design professions will help. Admittedly the designs in the September issue were not startling in concept but Barrett promises that they are only the first step in a long-range effort to improve outdoor advertising structures. If the effort contains elements of self-interest it is at least enlightened self-interest and, as such, deserves to be encouraged.*

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IF YOU HAVE THE MEETING, WE HAVE THE CHAIRS



# art

DORE ASHTON

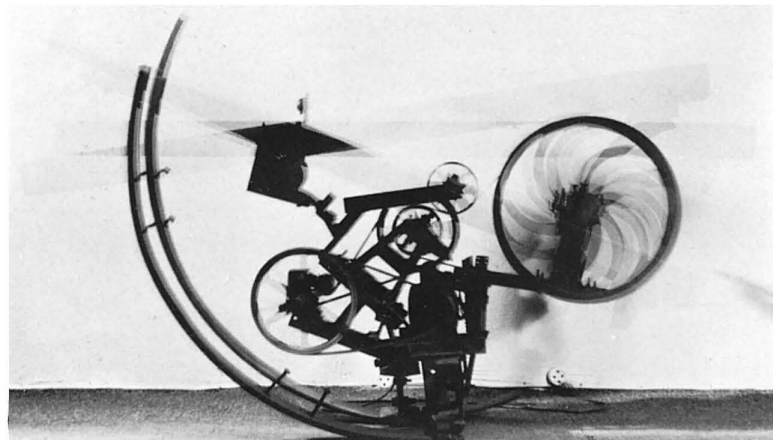
Although Paris is always Paris as the old song has it, Paris like any other great metropolis alters its face and psyche with the times. It is easy enough to see the changes in visage. The more subtle changes one can never be sure of. My own impressions after a recent visit are difficult to sort out. Much of what I have to say is based on the sharp, immediate sense impressions one gets after several years' absence, and on the cues derived from extensive conversation obliquely aimed at sizing up the changes in what is called the moral climate for want of a better phrase.

Paris looked different physically thanks to the stern measures dictated by Malraux in which public buildings had to be cleaned and private buildings had to be painted. At first I thought prosperity was speaking, although it is hard to imagine the thrifty French businessman using so much costly paint. I was soon informed wryly that it came about not from prosperity but from coercion. (The meanness of the French entrepreneur is still visible in the ugly public housing marring the countryside. In some of these twelve-story buildings, I'm told, the elevator is installed so that only those living above the fourth story have access to it.)

On the Left Bank, where some of Paris' most elegant old private homes have now been converted into chic and costly apartment buildings, traffic chokes the streets and long-haired dandies disport themselves with poodles. The well-dressed sightseers on Boulevard St.-Germain ogle the well-dressed dandies and the occasional beatniks, while the beatniks and dandies ogle each other. The climate here, at any rate, is definitely changed.

One evening we sat taking coffee in the quarter and noticed the extent of the new French police force: there seems to be one flic for every citizen and they are terribly conspicuous. For more than an hour we watched four gendarmes stop every young man who passed asking

Jean-Charles Tinguely  
"Bascule No. 5" 1965  
Photo by André Morain



for their identity cards. Parisians assure me that this is most unusual, but they couldn't deny that the de Gaulle police force assumes the proportions of an army. "They are very polite," a friend told me, "but they are always watching." It remains to be seen how polite they will be when next the Left decides to show its teeth.

Some minor changes in habits and mores were noticeable. The most significant, perhaps, is the wane in the consumption of croissants. Where just a few years ago you could go into a cafe and have a croissant with your coffee any time during the day now you have to get there first thing in the morning or miss the opportunity. Instead of croissants there are soggy slices of fruit cake wrapped in cellophane—a sad americanism indeed. "On garde la ligne" a cafe proprietor told me with a shrug. Watching the figure is certainly the price of bourgeois prosperity as well we know, but really, at the price of croissants!

Malraux's role as culture commissar inspires nothing but grumbles among the cognoscenti who point to a sinister law he pushed through

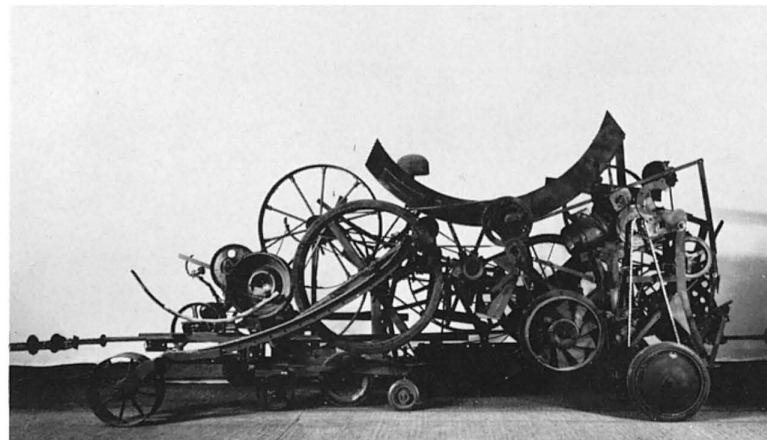
which enables the government to pre-empt anything they please in the commercial art galleries, paying only a token price determined by the government, not the dealer. He may have cleaned up Paris, but he has also thrown a pall over its commercial establishments. The much discussed crisis in the gallery world seems to remain a topic of conversation, although one can never be sure how accurate cries of crisis are where big business is involved.

A summary tour of the art galleries indicates that not much has changed. Unlike New York, Paris seems to have kept its old formation in terms of galleries with the big galleries on the right bank calmly pursuing their usual course and the smaller galleries on the left bank trying to keep up with the times in a rather desperate fashion. I asked a young critic about the gallery situation and he smiled. Well first, he said, there are the American three. They make a lot of noise, especially Sonnabend. (The noise from the last Venice Biennial is still audible in Paris, along with French cries of outrage.) And then, he continued, there is Claude Bernard who has spread all up and down the Rue des Beaux Arts but hasn't added much. And then there are a lot of smaller galleries, but nothing forceful has really come through.

By forceful, he meant in terms of a movement or a distinct change in context. For the moment, obstreperous pop art ("new realism" is the French version) still dominates conversation. The Castelli-Sonnabend empire (no one seems to have missed the famous advertisement showing their colonies all over the world on a map) gives rise to much bitter raillery, but is taken quite seriously, judging by the amount of time spent discussing it. It seems to have taken to heart Oscar Wilde's remark that there is only one thing worse than being talked about and that's not being talked about.

Of course the discussions of Paris School versus American School are tiresome and only the unsophisticated take any pleasure in comparisons. Paris is a great city to this day, and, inevitably, there is always something stirring in its cultural life. American chauvinism which sponsors the notion that Paris is dead is infantile. And French chauvinism which dismisses everything American as vulgar and bothers little to inform itself beyond a most superficial level is boring. The truth is, for better

Jean-Charles Tinguely  
"Char" 1965  
Photo by André Morain



or for worse, that the level and style of most painting and sculpture either in France or the United States is about the same. I've been asked dozens of times by naive countrymen if "anything is going on in Paris." It should be taken for granted that even if there is no visible evidence of anything going on in any large city, there is always something fermenting somewhere.

The fact is, of course, that plenty is going on in Paris. While it may be true that the visual arts are not enjoying an optimal moment (and I have no way of knowing for certain since I was there only as a visitor, not as a resident able to spend weeks and months visiting studios), the intellectual life of the city, as reflected in written material, is as vivid as ever. Speaking now only of art criticism, I would say that there has been a decided change for the better: art critics of the younger generation are more open to international currents of thought, more economical in their language and sentiment, more sober in their judgments and less tied to galleries and teams.



There are always new publications in Paris where such things can still be managed without tremendous investments, and one of the most exciting is the monthly started last season by Paul Facchetti, a dealer who has always cherished a love for printed documents and has, through the years, published many handsome catalogues.

Facchetti's monthly, *Mardi-Samedi*, is named for the exhibitions he suddenly staged last year lasting only from Tuesday through Saturday. I never got around to asking the reason for these wildcat shows, but I did hear a lot about them and gather they made quite a stir.

His review is an excellent, open-spirited publication in which articles on music, psychiatry, philosophy and other fields are as frequent as articles on individual artists. Good reproductions from different galleries adorn the large pages.

Certainly one of the most attractive aspects of *Mardi-Samedi* is the presence of Julien Alvard in his most wicked satirical vein. Alvard, with the fine malice bred by generations of inbred French literary life, undertakes a roving critical column (movies, theatre and music figure as well as the visual arts) disguised as the amanuensis for the lady-in-waiting of the Japanese Empress Sadako. "Shonagon recalls to her faithful readers," he writes in one issue, "that before turning over her pen to the abominable Alvard, she was the author a thousand years ago of the Pillow-Book." Shonagon laments from time to time her impulsive gesture, declaring that the unspeakable M. Alvard has made her say some rather unspeakable things.

In these extremely funny notes, Shonagon-Alvard does indeed say some scandalous things, but always with a point. He turns the knife—or rather, the stiletto—wherever possible in order to score the more ignoble practices and attitudes rampant in the art world today. Alvard's great wit is not always translatable, but his point of view should be better known in English. Nothing is sacred in the eyes of Shonagon and thank heaven for that. She has given Alvard a perfect situation in which to exercise his sardonic mind on the one hand, and his tremendous sense of humor on the other.

Among the articles that appeared in *Mardi-Samedi* was an outspoken text on the culture industry by the renowned German sociologist and

esthetician, Theodor Adorno. What Alvard attacks with thousands of small stings, Adorno attacks in its grand lines. The term "culture industry," he says, was probably first used by himself and his colleague Horkheimer in their book "Dialektik der Aufklärung" published in 1947. They had sketched the book in terms of "mass culture" but abandoned that term in favor of "culture industry" in order not to play into the hands of its advocates, "those who claim that it is a matter of a sort of culture springing spontaneously from the masses themselves in the current version of popular art."

Far from being an art of the masses, Adorno insists, it is a consumer-oriented industry imposed on them. This culture industry affects even the domains separated for centuries into high and low art to the detriment of both. "High art is seen frustrated in its serious aspect thanks to speculation about its effect," he writes, "while low art is made to lose through domesticating and polishing the elements of rude, irreducible nature inherent in it."

Adorno deals harshly with the usual rationalizations put forward by those engaged in the culture industry. The productions of the imagination in the style of the culture industry are not "also" merchandise, as compromised artists like to claim, but are *integrally* merchandise. The culture industry is not even obliged to seek an immediate profit any more. It works assiduously in "public relations" fabricating "good will." They now go seeking the client "to sell him total consent, without reserve; they advertise the world as it is and thus, each product of the culture industry is its own advertisement."

The culture industry has apparently not had much effect on the French public when it comes to museums. Despite the greatly improved exhibition schedules and the impressive techniques now being used for exhibition installation—something the French have only just begun to excel in—the public remains relatively small. Still, the presence of such lively curators as Francois Mathey at the Musée des Arts Decoratifs has given Paris an appetite for exhibitions of recent work.

Mathey staged a comprehensive exhibition during the summer covering the work of three major School of Paris sculptors born between 1921 and 1925, and having a body of work behind them that could stand

César Baldaccini  
"La Victoire de Villetaneuse" 1965  
Courtesy Musée des Arts Decoratifs, Paris



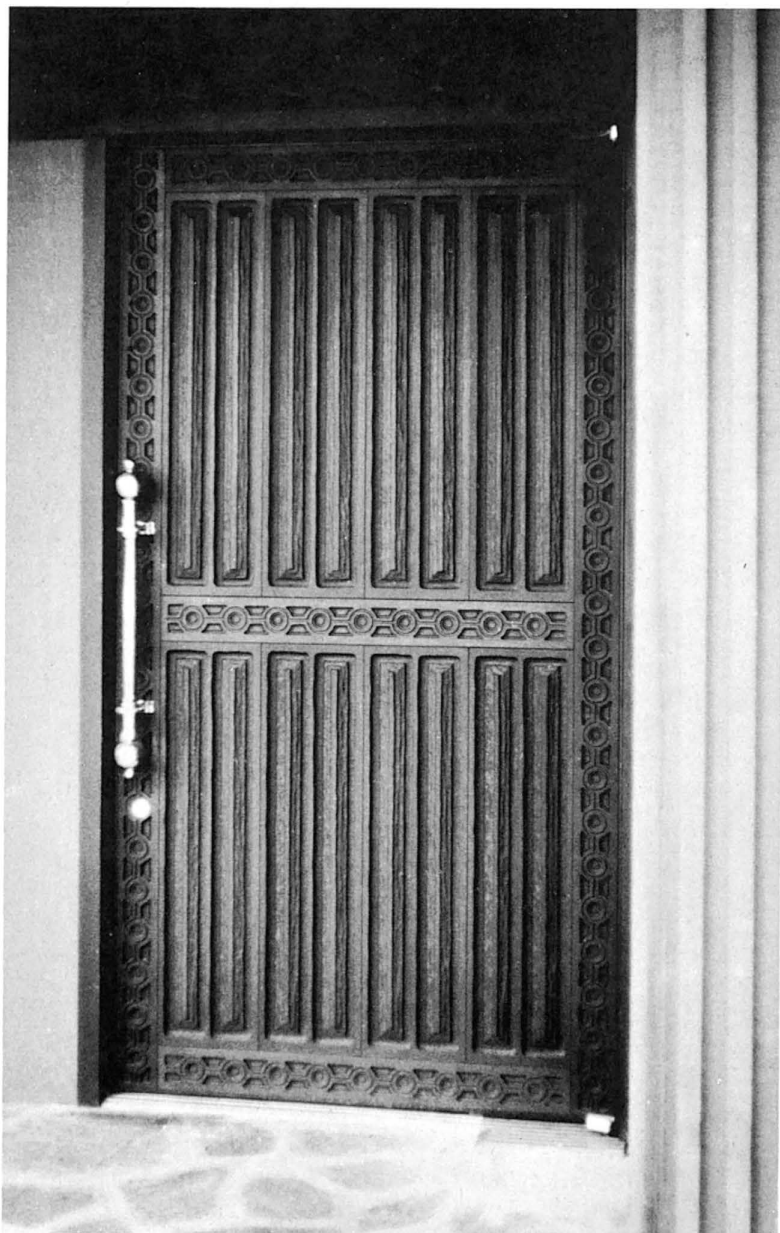
Roel d'Haese  
"To Lumumba" 1961, bronze  
Courtesy Musée des Arts Decoratifs



Kumi Sugai  
"L'eclipse du Soleil" 1965,  
200 x 160 cm



Entrance to the Jolly Roger Restaurant, Sherman Oaks, Calif.



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the scrutiny of retrospection. César, Roël d'Haese and Tinguely, form a trio of relative contrast. César's evolution from welded metal to bronze to compressed metals to bronze again shows him seeking increasingly formal simplicity. The myriad details in earlier works are absorbed and ordered in recent sculptures. Not only has he all but abandoned the clever effects derived from the compressor but he is now pursuing monumental effects in a group of recent bronze nudes. These figures, partially composed of the exposed small parts used to build up the mass and partially polished smooth, partake of Germaine Richier's exacerbated pathos and Picasso's expressionism. They are not quite César yet, but his hand is obviously reaching for serious, large formal solutions to the problems inherent in his own earlier work.

Tinguely's recent work also indicates a formal preoccupation. Many of his rocking and thrusting machines are beautifully organized so that even in stasis, they are expressive. Certainly the most impressive piece in the exhibition was an enormous chariot, almost the size of a small tram car, which moved forward and back on steel tracks, squawking, clattering, heaving all the time. Tinguely's humor still strikes me as anthropomorphic in spite of his deliberate use of exposed machine parts. When the best of his infernal inventions is in action, the movements always touch the source of laughter that is self-mocking. The butting or jostling motions parody human blundering. Roël d'Haese is a born expressionist with a few surrealist aberrations. His earlier works, almost all in bronze, are awkward meetings of odd parts, often cast in satirical or horrifying juxtapositions. (An old boot or gloved hand stuck among a welter of disparate, slightly obscene abstract shapes does make a jolting impression.) From these earlier, somewhat ambiguous exercises in horror, d'Haese moves on to more explicit figurative sculptures which often border on mawkishness. His last work, an equestrian figure reminiscent a bit of Daumier, more of Marini, and still an inept caricature, struck me as sadly short of his obvious intention.

Concurrent with the sculpture exhibition was an excellent display of drawings, texts and photographs of the work of Oscar Niemeyer. In an introductory note Niemeyer sadly remarks that although the exhibition ought to have pleased him, he is depressed by it. "I have built public edifices for the State, I've worked for the rich, the powerful. Never have I been able to work for the depressed classes, for all the world of the poor that constitutes the greatest part of my Brazilian brothers."

(This in contrast to the heady optimism expressed by an artist like Vasarely who told me, "it is statistics that speak" and that after all things were improving all the time for the unfavored classes.)

The problem of architecture interests M. Mathey, it seems, even as it interests a number of French artists, many of whom have formed collaborative teams. In his forward to "Babel 65," an exhibition of works "presupposing a monumental conception" at the Musée Galliera, Mathey says that it seems "that within the present social and economic conditions, integration can only be an alibi for mediocrity." He forthrightly questions the enthusiasm of a number of sculptors and painters who have proclaimed the collaborative principle as the only modern *modus operandi* for the artist and comes back to the inescapable fact that the truly creative artists have never successfully subsumed their personalities when collaborating with architects.

The bizarre Musée Galliera was host to a rather awkwardly shaped exhibition called "Promises Kept—Painters from 36 to 50 years old." This is a catchall exhibition, faithfully mirroring all the tendencies in Parisian painting life including the extremes of poster realism and pop art. But such omnibus shows have their virtues. This one, for instance, proved once again that a large show almost anywhere—Paris, Chicago, Los Angeles, Rome—is about equally good and equally bad.

Among the more familiar School of Paris names contributing valuable works were Riopelle, more solid than he's been in years, Debré with a bold nearly monochrome earth-green abstraction, Alechinsky with an excellent large ink painting, Istrati with a black and white study in subtle washes and microscopic forms, Sugaï with a brilliant *trompe l'oeil* double-shell abstraction and Corneille. An Egyptian painter, Aldini, is beginning where Soulages left off, and does it well. As for the new exemplars of realism, both of the pop and the poster varieties, they look about the same as their counterparts anywhere else: ephemeral.



READERS OF THE AIP JOURNAL PLEASE RAISE YOUR HANDS

The time and space available for continued intuitive design gambles in city and regional planning, for subjective analysis, decision by coin-toss (where heads and tails we lose) are approaching zero at the same rate that population and construction are increasing. Fast.

In Europe the magnitude of urban problems has been recognized for years and governmental planning commissions established at the regional and supra-regional level, while in the U.S. official planning policy is still conceived and administered in terms of acres. In Southern California, as in most other growing urban areas, artificial and obsolete political boundaries and the pressures of private interests have kept planning and redevelopment at the Tinkertoy level of trial and error. Industry and housing growth, unhampered by such boundaries, continue to expand explosively, creating a legacy of irrational sprawl and derelict land.

Tomorrow's urban environment (needed today) will be shaped by those ready and able to deal with it in terms appropriate to the increasingly complex problems of the city. Not too long ago, architects were the logical ones to solve or direct the solution of the incipient crisis which is now no longer incipient. It would have required a measure of re-education, a growing to meet the multiplying demands, learning the fundamentals of a number of other disciplines and the methodologies of science. To oversimplify, the architect was—and still is—faced with a choice between art and science. So far he has chosen to sing harmony with his own echo while trying, as one planner put it, to work both sides of the street. It is paradoxical that at a time when he is, almost overnight, enjoying a heady new importance in the public mind and press, the architect has, in fact, allowed himself to be relegated to the role of expert on all of the if not unimportant then at least peripheral aspects of our urban crisis. He is asked to serve on committees to promote a more beautiful America, preserve historical buildings, design national monuments. When there is a lull, he makes certain that it is only momentary by forming his own action groups and makes pronouncements on the evils of overhead power lines, billboards, hillside developments. In short (and in general) he has become a consultant on urban décor.

Large scale planning requires the combination of a number of skills, the team effort of economists, sociologists, engineers, designers and many more. But in the final analysis the plan of tomorrow's urban environment will be determined by land use and it is becoming increasingly apparent that the *significant* designing will be done, not by a resolution of the conflict among Beaux Arts, Bauhaus and other design theories, but by the planner. The architect who considers the computer, prefab-

rication, and other technological tools and advances as threats to his creativity; and sees as unrelated to architecture the painfully accumulated knowledge and methods of those sciences now being used so fruitfully by planners, will end as a mere exterior decorator.

Planners, at least that segment of the profession which has captured the *Journal of the American Institute of Planners*, already dismiss the architect as obsolete, a craftsman gluing his building blocks together. Faced with the same alternatives—art or science—planners whose work is appearing in the *AIP Journal* have chosen science. They are building up a body of empirical knowledge, a firm theoretical base for problem analysis and decision-making.

Unfortunately in electing for science, planners have adopted the transcendently obscure language of the scientist as well as his methodologies. They employ an arcane argot and an impossibly tortuous prose style that has effectively shut the door on the architect. And on the door they have hung what might well be the motto of the *Journal*: "We Shall Do It Without You!" For example, in discussing the programming of a mathematical model concerned with growth forecasts of an urban area an article in the May issue states: "The change in the subregional share of a located variable in each subregion is proportional to: 1) the change in the subregional share of all other located variables in the subregion; 2) the change in the subregional share of a number of locator variables in the subregion; and 3) the value of the subregional share of other locator variables."

To translate: Business and other activities in an area are affected by changes in their area.

S. I. Hayakawa had this sort of thing in mind when he formulated his general rule in *Language in Thought and Action*: "Whenever the social function of a learned vocabulary becomes more important to its users than its communicative function, communication suffers and jargon proliferates."

It is understandable that the planner, like a child towards its parents, should be intolerant of the architect and the resistance of the architect to change, but the planner should also remember that all questions are not answerable by knowledge alone. He needs the help of enlightened architects and shouldn't discourage those who want to become enlightened. In his turn, the architect must keep in mind that time is running out, that if he wants to make any significant contribution to tomorrow's urban environment, he had better find out what those who are preparing themselves to create that environment are up to. Even at the cost of reading the *AIP Journal*.

*in passing*







## SMALL MUSEUM BY LEEFE & EHRENKRANTZ, ARCHITECTS

Museum West in San Francisco is a museum for the display of contemporary crafts and it serves as well as regional headquarters for the American Craftsmen's Council. It is located in Ghirardelli Square, a shopping center developed from an old chocolate factory.

Principal feature in the design of the Museum is the ceiling—an open frame structure conceived to carry any displays one might wish to install and at the same time to carry all of the services necessary for the space.

The grid is constructed of tubular steel sections called Telespar manufactured by Unistrut Corporation of Berkeley and Wayne, Mich. As used in Museum West it is a three dimensional space grid, a rigid and extremely efficient structure which permits objects to be hung at any point within the room. One is not limited to hanging things against the wall nor is one forced to build structures or to use pedestals to raise objects from the floor. With the space grid the entire space of the Museum becomes useful exhibit space. One can literally fill the room with objects in a way which enables the viewer to pass among them and gain an intimacy unobtainable where objects

are placed on stands or in cases. It is no problem for example to place an object overhead so that it can be viewed from below.

Electrical service is carried on top of the space grid so that lights can be clipped to the grid at any place. The grid is arranged so that opaque or translucent panels can be placed in any of the squares to vary the type and intensity of the lighting. Opaque light panels placed on the top layer of the grid can be used as reflecting surfaces while translucent panels on the bottom level can be used to diffuse light from a source placed above.

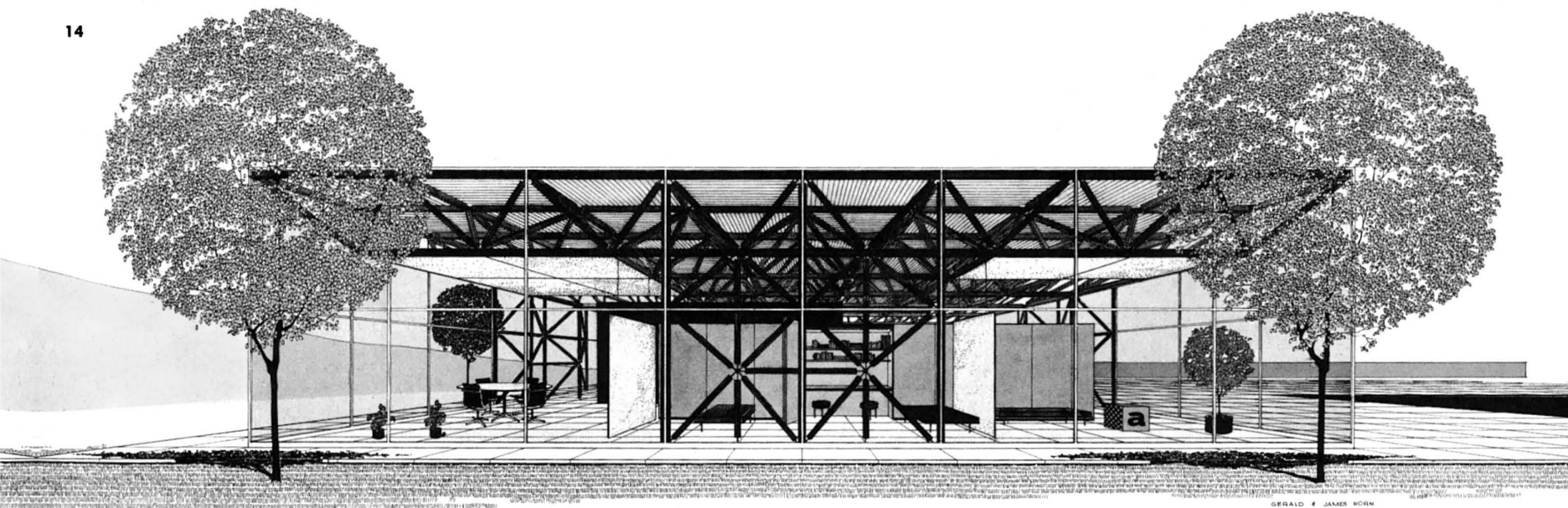
There was one other consideration in the selection of the open grid for the ceiling of Museum West. Because the Museum is located in an historical landmark, the architect felt very strongly that the character of the existing brick building should be disturbed as little as possible and so selected the open grid to allow the existing structure to "read through." It was possible to carry all the facilities needed for the Museum within the framework of the space grid so that the rest of the space could be altered by no more than a fresh coat of paint and new floor covering.

*Exterior photos by Ernest Braun*

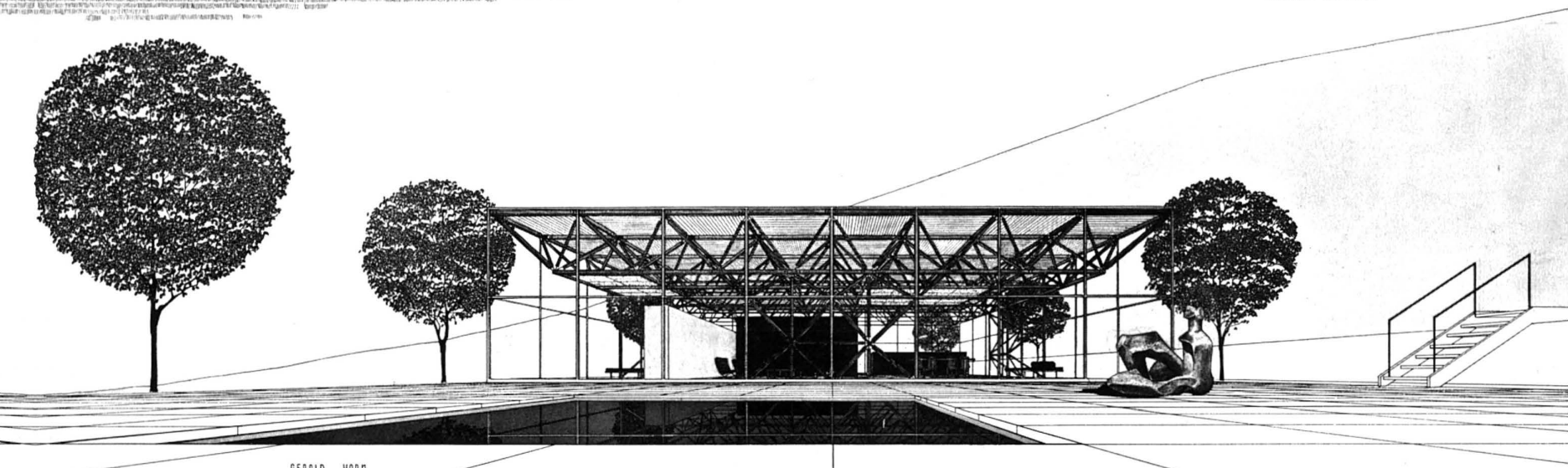
*Interior photos by Rondal Partridge*



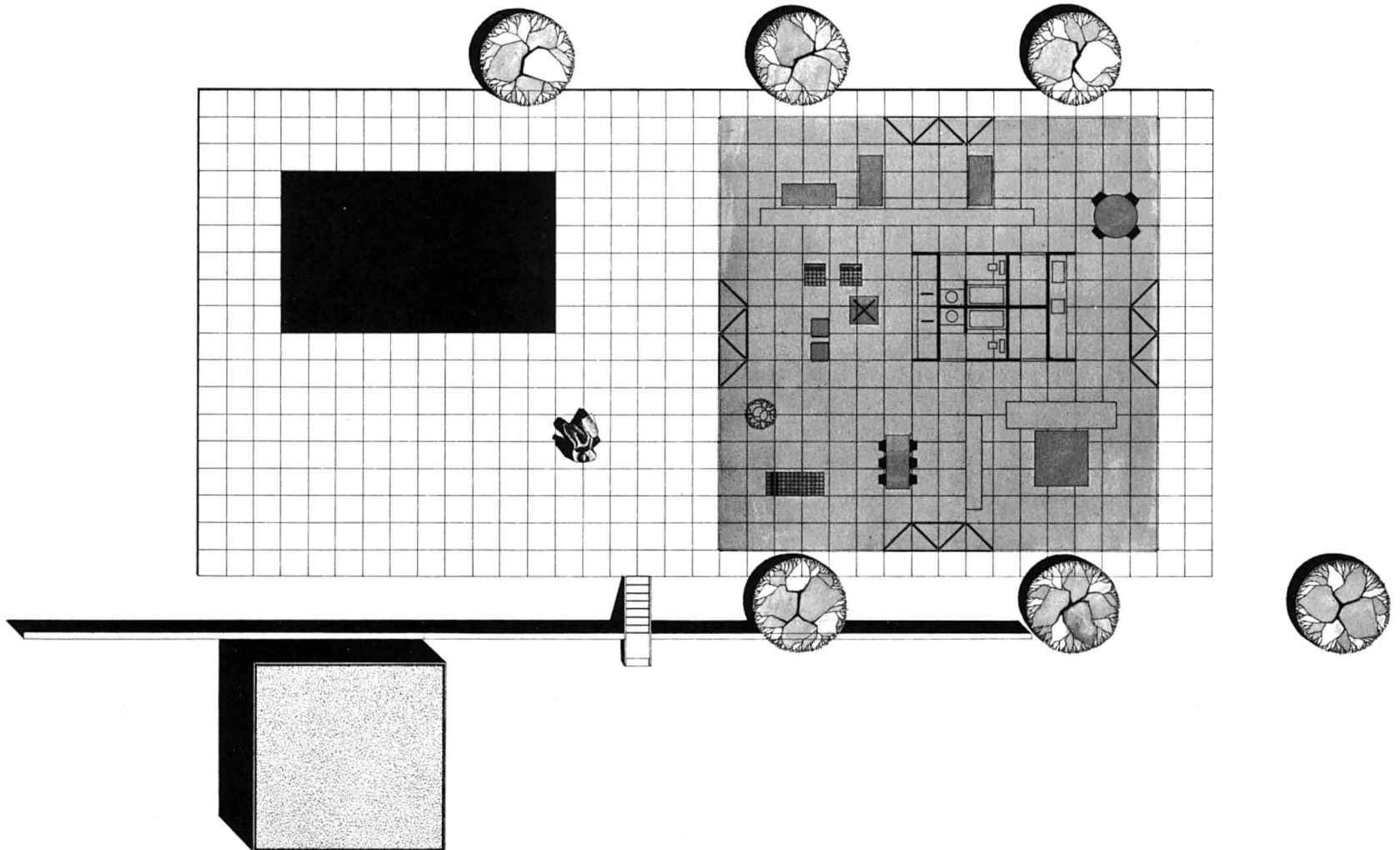


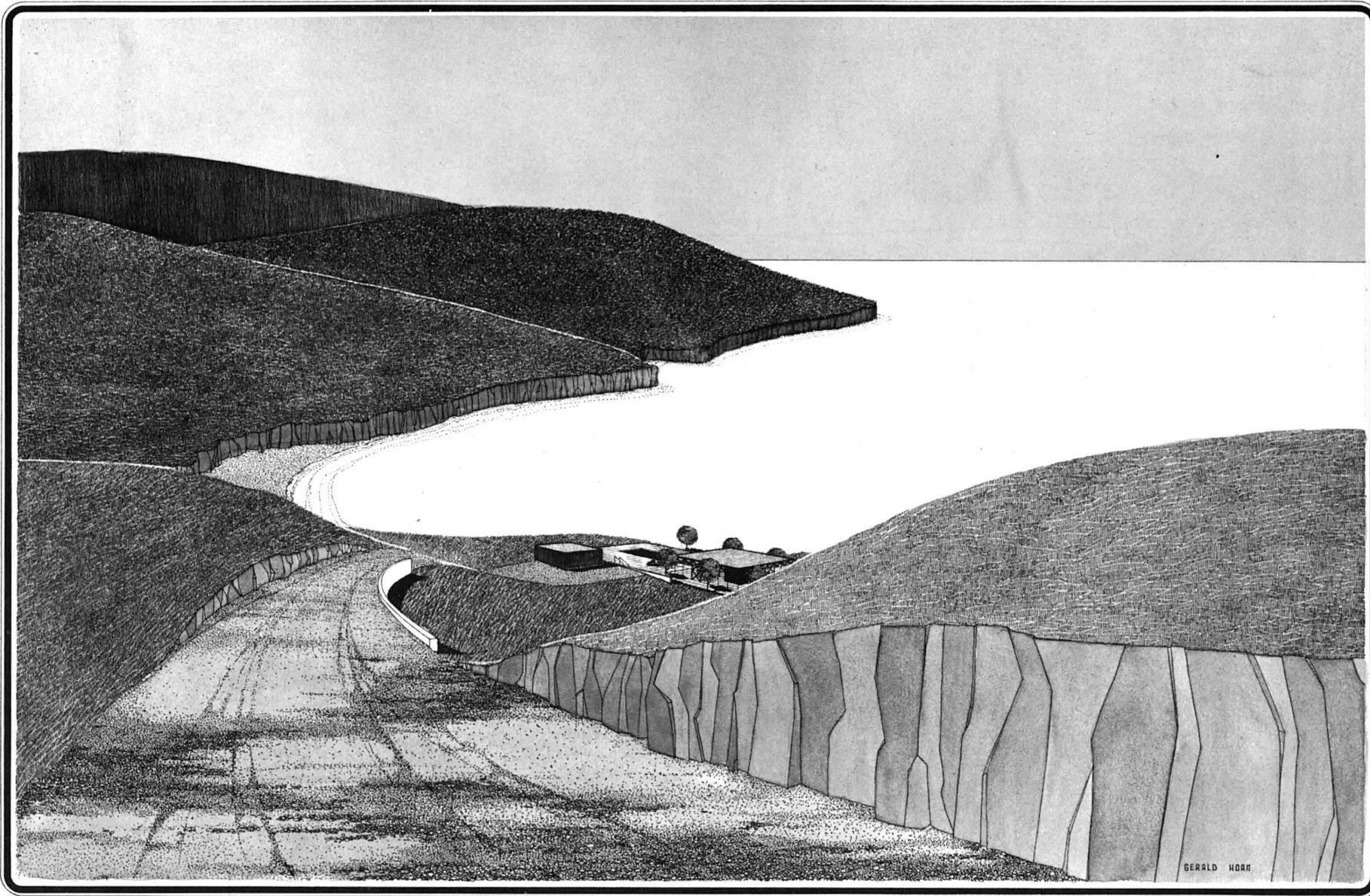


GERALD & JAMES HORN

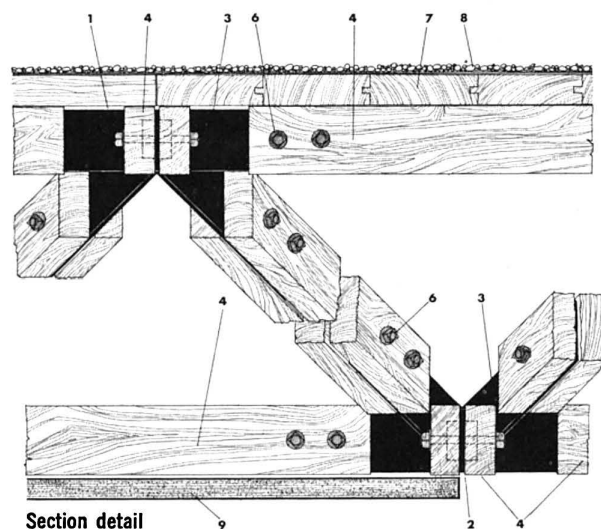


GERALD HORN

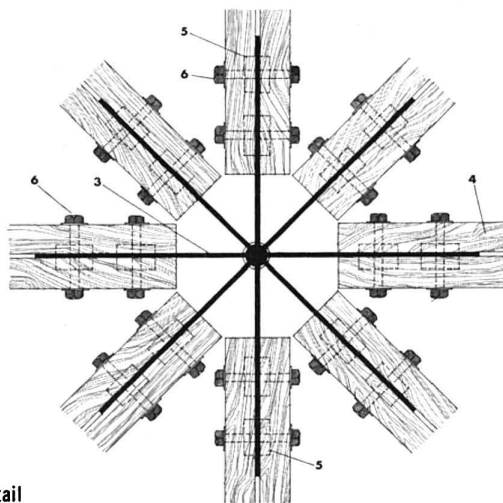




## SPACE FRAME HOUSE BY GERALD HORN



Section detail



Plan detail

The problem given the designer was to develop a house with maximum flexibility of space at minimum cost. Flexibility is achieved by employing permanent partitions only where necessary and designing a modular ceiling panel which is attached to the bottom chord of the roof frame to form the finished ceiling but which can be dropped to a vertical position and lowered—individually or in multiples—to serve as area dividers.

Low cost is assured by the choice of inexpensive materials and framing that allows a high degree of prefabrication and minimal on-site labor. The frame is composed of double 2 x 4s connected by  $\frac{1}{4}$  inch steel plate; a split-ring connector is welded to the plates for strength and to reduce the number of bolts needed. The frame members can be fabricated and small segments assembled in the shop and transported to the site, bolted into larger assemblies and lifted into place. The 52-foot-square structure is to be enclosed by  $\frac{1}{4}$  inch plate glass.

- 1 Instrut connector
- 2 Outstrut connector
- 3 Steel connector plate
- 4 Double wood chord
- 5 Split ring connector
- 6 Bolt and washing
- 7 T & G Sheathing
- 8 Built up roofing
- 9 Movable ceiling panel



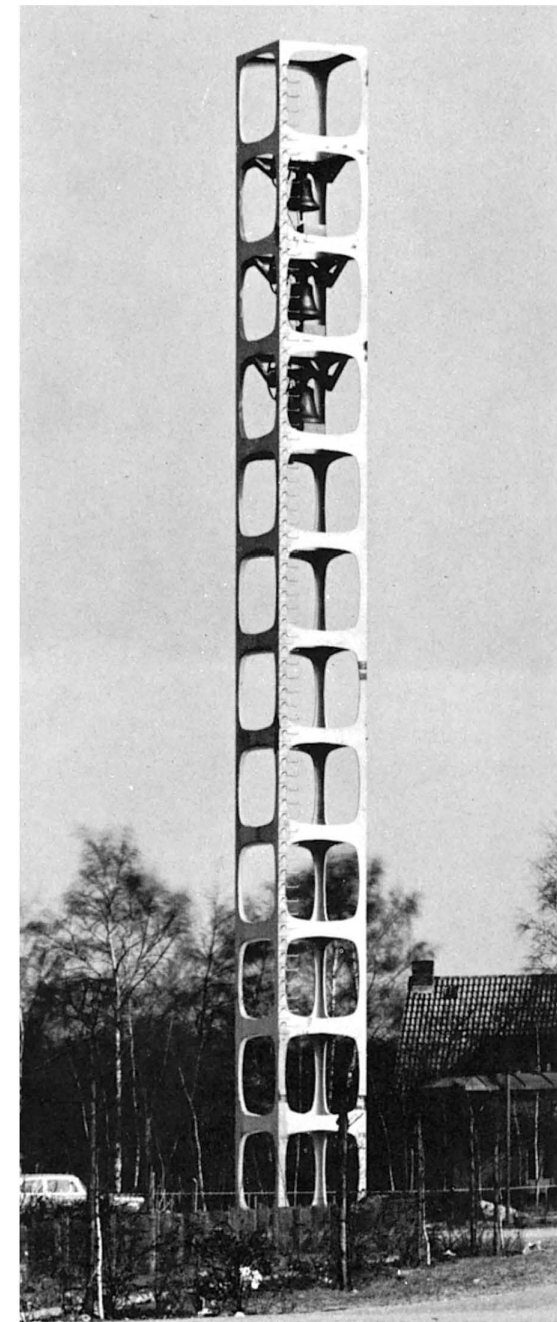


This project was undertaken jointly by the first and second prize winners in the competition to design a bell tower for the Lutheran Church of Berlin-Zehlendorf-Schonow. Essentially, the winning design by Bubner was followed but adapted to a construction system developed from research studies by Frei Otto begun in 1947. The objectives of the research were to develop a minimum material system stiff in bending and capable of withstanding moments.

As developed, the 80-foot tower, with fish belly trusses capable of resisting considerable stresses, can be considered either as hollow cubes composed of panels with cut out holes and bulkhead-like connections or as a diagonal-less framework with stiff joints. It weighs 16.8 tons and has a reinforced concrete foundation of 60 tons.

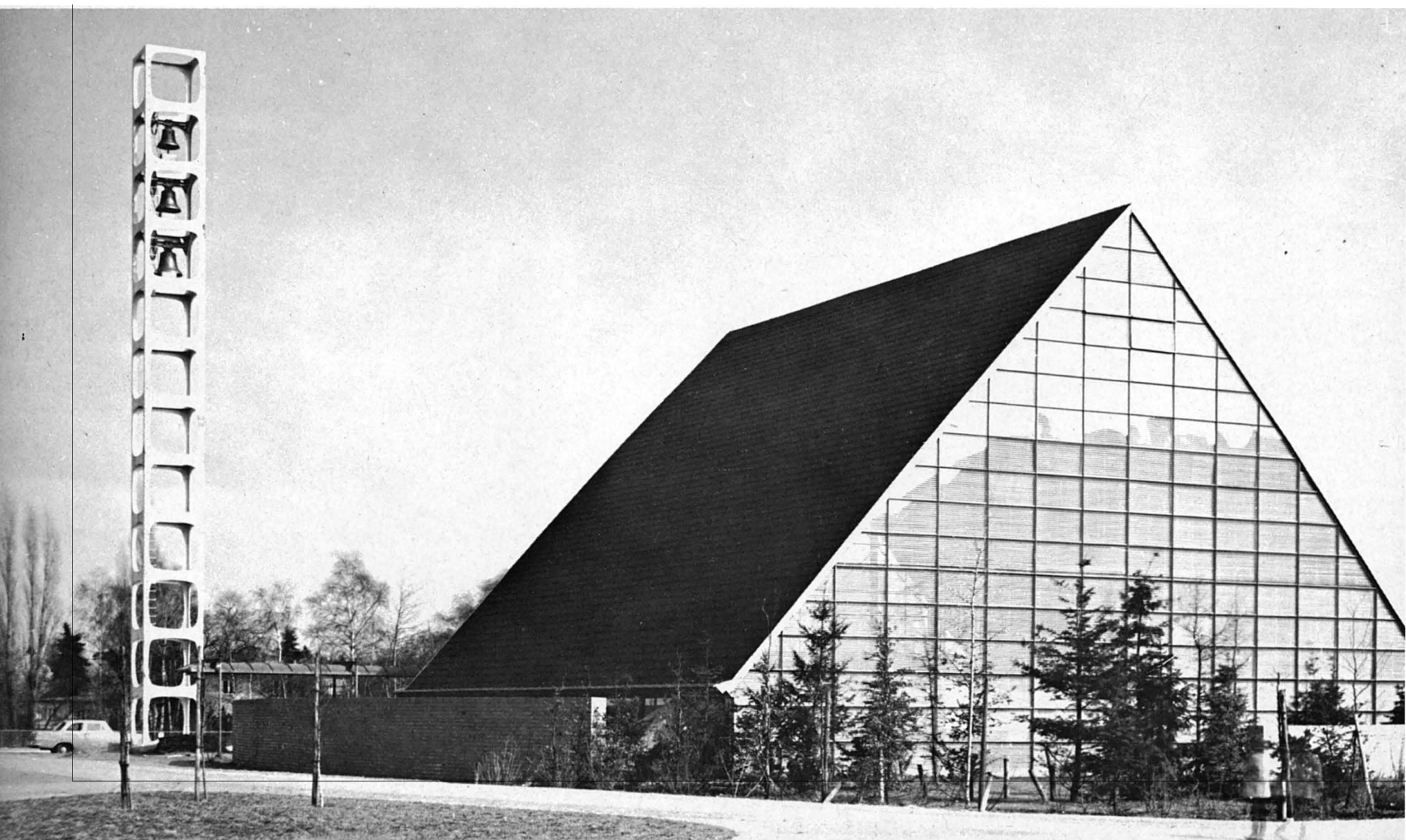
Calculated natural frequency characteristics of the tower are 2.98 vibrations per second; largest deformation of the highest bell at the most unfavorable point in its oscillation is .66 inches. Weight of the bells: C (highest) 638 lbs., B 924 lbs., A minor 1309 lbs.

The tower was assembled at the factory from single steel plates  $\frac{4}{10}$ " to 2" thick with concealed fillet and butt welds, then transported to the site in one piece, positioned by crane and bolted in place. Engineer was Wolfgang Penther; vibration calculations by Herbert Sander and Axel Baumgart. Text translated from the German by Richard Larry Medlin.





**BELL TOWER BY EWALD BUBNER AND FREI OTTO, ARCHITECTS**





*This is the fifth and final article in a series by the authors, entitled "Modern Architecture/Birth, Establishment and Future." The fourth was published in A & A February, 1965.*

It is a dangerous thing to talk about the future. The prediction of events, however solidly based on actual trends of the present, ends up in arbitrary selection; and the act of judgment, which wavers even in the case of positive facts, here becomes more subjective and uncertain than ever.

There must therefore exist important reasons to make one stray in that direction.

Some write about the future in order to explain the present; they hope to demonstrate that methods or actions which today seem inhuman will be justified in the course of time. Some write about the future in order to escape the hard realities of the present. And others write because they possess too rich an imagination; they write in order to entertain, or teach.

The architect, however, writes about the future because of a sense of responsibility. The phenomena he has to face in his work are by nature dynamic, i.e. they develop along lines of progressive acceleration. Therefore, if he wants to succeed in the present, he must aim at the future. The construction of any work requires time; if it is designed for the present, when it is finished it will already be outdated. But if it is based on a calculation of the dynamic development of conditions, it will most probably remain useful for a long time.

The architect studies the past in order to learn; the present, in order to evaluate; the future, in order to determine the perspectives of man's environment, so that he may take the necessary measures to prevent the powerful trends of the present from tearing apart the fabric of the city, so that he may direct them instead into a new pattern of urban organization.

### 1. The Tendencies of our Times

Beyond change itself, our times are characterized by the acceleration of change. The human trends that originated in the period between the two World Wars, and even the ones dating from the Industrial Revolution, are now developing not only with speed, but with an acceleration truly frightening.

This phenomenon can be seen, first of all, in the rates of population growth. During antiquity and the middle ages, the average annual increase was 0.1%, in the mid-18th century it became 0.3%, in the mid-19th century 0.6%; today, it has reached

1.8%. If this rhythm of growth persists, world population will double within the next forty years, and will be 6,280,000,000 in the year 2000.<sup>1</sup> The following table, which gives present population totals and the rates of increase, also shows that in countries like Japan, England or Germany, the density of population is already quite high. One cannot help imagining what the situation will be around 2000.

Table 1: Population in Countries of More than 30,000,000, 1960.<sup>2</sup>

Country	Population (in millions)	Annual Rate of Increase	People per sq. mile
China	660	2.5	178
India	432	2.0	343
USSR	214	1.8	25
USA	180	1.6	50
Japan	93	1.0	653
Indochina	93	1.4	161
Pakistan	93	2.1	254
Brazil	66	2.4	20
U. K.	53	0.5	558
Germany	53	1.3	558
Italy	59	0.5	424
France	46	1.0	214
Mexico	34	2.9	45
Poland	30	1.7	247
Spain	30	1.2	155

According to the above table, population density varies greatly from country to country. Moreover, when the artificial barriers that limit emigration will be lifted, we shall witness an inevitable shifting of population that will alter the image considerably.

A second tendency of our times is the concentration of population in urban centers. Already in 1950, 20% of the world population were urban dwellers. If this trend continues, in the year 2000 the percentage will climb to 45%, and in 2050 it will be 90%. Many factors are responsible for the growing rush to the cities; it is mainly due, however, to the influence of new economic trends. For one of the main phenomena of our times is the transition from primary occupations (agriculture), not to secondary (industry), but directly to tertiary ones (commerce, bureaucracy).<sup>3</sup>

The inevitable consequence of this is a leveling of the standard of living of the various social groups. Social justice, a major preoccupation of 19th century intellectuals, is now, under the pressure of economic realities, finally becoming an established fact. For, in the more developed countries of the world, the salary of the skilled worker equals, and sometimes surpasses, the salary of the scientist; and in any case, it is higher than the salary of the lower public or private employee. Perhaps this leveling tendency is due not only to the raising of lower bracket incomes, but also to the realization that each worker is at the same time a consumer.<sup>4</sup>

Thus, while the 19th century was characterized by social injustice within the framework of each nation, where an immense gap existed between the standard of living of the factory and rural worker on one hand, and that of the middle class on the other, the 20th century must face the problem of extreme differentiation between the countries themselves.<sup>5</sup> Perhaps one of the most important characteristics of our times is the fact that, while certain countries have a surplus of agricultural production, a surplus they either destroy or dis-

tribute among poorer nations, in large areas of the world famine is still endemic.

It is true that, after the Second World War, the under-developed countries were finally given an equal right to participate in international affairs; today, former colonies can voice their opinions and vote along with the other countries in the United Nations. But this is only theoretical. Actual equality will not be achieved unless an increase of production output raises the standard of living in these countries.

Nevertheless, we are witnessing a gradual change in the purpose of human endeavor. Primitive man fought to avoid violent death and to secure his food. After the establishment of law and organized society, man became the provider of his family. Today, in the more developed countries, food, shelter, health security, education, etc., are guaranteed to all citizens by the state, against six or seven hours of daily work. It goes without saying that this idyllic situation applies to a very small part of the world.<sup>6</sup> But even so, its attainment shows that it is no utopia, and that our duty now consists of trying to extend it to the rest of the world.

What are the new goals human endeavor will seek? Beyond religious or metaphysical aspirations, survival has always been the main purpose of human activity. This survival has never been more easy to secure than now. The problem, therefore, is what direction human energy will take in the future. Will education, or entertainment, prove capable of filling, or justifying, human existence? Will the sickness of our times, this inability to discover a deeper meaning in life, become universal? Or will there appear new, unknown dangers, which will provoke, like *dei ex machina*, a new struggle for survival?

### 2. The Demands of Man Upon His Environment

The growth of population and its concentration in urban centers, the gradual leveling of social and economic differences within each country, the tendency of alignment of living standards within progressively larger areas of the world, the shifting of human endeavor from the struggle for survival to the enjoyment of a comfortable and pleasurable existence, all these trends are crucial to the shaping of mankind's future.

These trends also trace the outlines of human rights and demands—of political and economic rights, of demands upon the society and upon man's environment.

The architect's work is the shaping of man's environment. That is why he follows closely the great currents of his times. Already, the formulated wishes concerning human environment have become imperatives. The architect, we must remember, was the first to lay the foundations for a new human environment, during the first half of the 20th century (Le Corbusier, La Charte d'Athènes, etc.). Up to now, the majority of these proposals have not been realized. But the growth of population and the rise in living standards are sure to impose, in the remaining decades of our century, the invention and application of radical solutions, guaranteeing the minimum necessary prerequisites to living as conceived by contemporary man.

The first of these prerequisites is satisfactory housing, i.e., housing offering comfort, security,

Rino Levi: Model for Brasilia, 1956-57.  
Capacity: 16,000 people

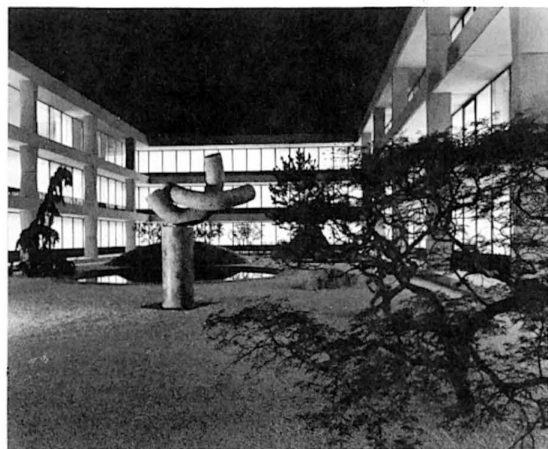


# BY THYMIO PAPAYANNIS, ARCHITECT, AND ANNA VENEZIS

*Text reprinted courtesy of Architectoniki*

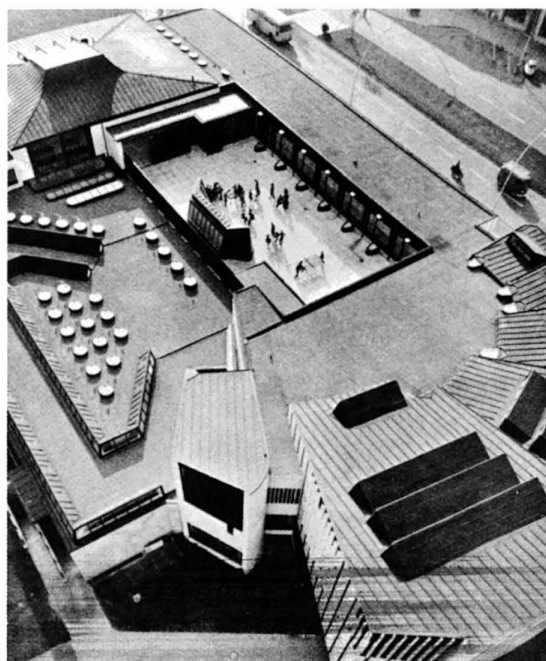
and delight. Talking about human dwellings, Buckminster Fuller once ironically mentioned the billions of dollars spent on the study of the astronauts' space capsule, and he concluded that if only part of that sum was given to the study of housing, most of its problems would have already been solved.<sup>7</sup> For in the world of today, a world of supersonic jet planes and space exploration, the house is still constructed with methods used fifty years ago. Perhaps the exteriors show some change; perhaps there are a few technical improvements, in heating or sewage systems; and there has been an effort to use new materials (metals, glass, plastics) and new technological methods (standardization, prefabrication, industrialization). But most of the attempts to innovate have not gone beyond the experimental stage. And none was able to improve in a radical manner the conception and construction of housing.

The second prerequisite to a satisfactory modern environment is the creation of healthy and pleasant working quarters. At the beginning, the emphasis was put on public health, where the industrial revolution had bequeathed a tradition of misery and squalor. Only lately has it been understood, however, that a healthy environment is not only a question of humanitarianism, but also a prerequisite for higher productivity.<sup>8</sup> And at present we are entering a new phase, where the creation of pleasant surroundings for the employees is considered fundamental. In countries such as the United States, many factories and office buildings are placed in the midst of green parks, and their interiors are planned in terms of comfort and delight. In a great number of countries, this approach is still considered a superfluous luxury. But it is beyond doubt that in the near future it will become a regular demand of the working man.



*Skidmore, Owings & Merrill: IBM Headquarters. Garden and sculpture by Isamu Noguchi*

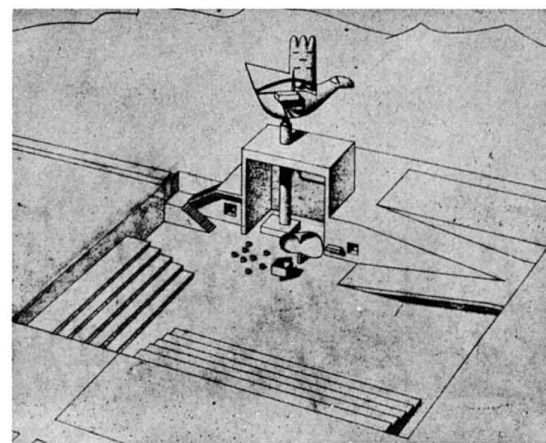
The third prerequisite is the provision of material facilities for organized entertainment and for education. As we have already mentioned, man's working hours are diminishing every year.<sup>9</sup> His spare time will be spent in various modes of entertainment and instruction. The cities of the future must reserve progressively larger areas for sports, parks, theatres, museums, libraries, cultural and civic centers. Simultaneously, regional planning must preserve large areas for the use of tourists and campers fleeing the cities. Within the cities themselves, we must safeguard whatever green spaces already exist. In general, then, equal emphasis should be put on the study and planning of housing, and on the organization of entertainment.



*Alvar Aalto: Cultural Center, Wolfsburg, Germany*

The growth of population and the creation of extremely widespread urban areas, as well as the new economic conditions, will greatly increase the mobility of the human being. Already, in the metropolitan areas, most working men spend two hours riding one of the various means of transportation; one hour to and from work is something quite common even in smaller cities. Besides work, many other functions will in the future require longer transportation (schooling, shopping, entertainment). For this reason, the fourth important prerequisite to a satisfactory environment is an adequate system of circulation and transportation. Up to now, all attempts to solve this problem have been either passive or curative. That is, when circulation (especially automobile circulation) became impossible, then new roads were constructed, the older ones were enlarged, bridges were added, yet, even before completion of the work, traffic had already increased so much that the new measures barely proved adequate even for a short period of time. For this reason, strange solutions were often proposed. For example, it has been proposed to abstain from ameliorating the highway accesses to Manhattan, so that commuters would be discouraged from driving their private cars, and would use instead public means of transportation. This question, therefore, also requires an approach that will not only deal with the problems of today, but will also make provisions for future developments, through planning and organization. At the same time, we must discover a way to diminish the need for transportation. Solutions such as the separation of residence from working quarters are now considered outdated, mainly because such separations aggravate the traffic problem.

Beyond the above purely functional requirements, the human environment that will be created in the future years must contain characteristic elements of psychological identification. As cities will grow in size, as millions of people will have to live in close contact and mutual dependence, it will become imperative to include elements, in both architecture and city planning, that will give to each part of the city a special and unique character, and will permit the inhabitant to identify with smaller,



*Le Corbusier: Sketch of monument, Chandigarh, India, 1951-54*

more comprehensible units. A square, a public building, a park, will constitute social centers, but also landmarks of psychological identification.

As man will gradually forget the fear of hunger and insecurity, he will become more sensitive to his environment. His being happy will therefore depend to a larger extent upon it. The responsibility of those who have dedicated themselves to shaping it will become even greater.

### 3. New Tools for the New Tasks

We have seen how the modern human tendencies will in the near future create enormous demands for housing, working facilities, entertainment, transportation. The fulfillment of these demands will be extremely difficult, because it requires not only intensive study and the invention of radical solutions, but also application on an immense, extensive scale. However, the technical prerequisites, the tools with which to face the new problems, are already being forged.

First, there is an inevitable social and political progress. The right of every man to "the pursuit of happiness" may have been recognized long ago, but only lately were its consequences finally grasped, only now is it finding practical application. Similarly, the participation of the state in questions concerning city and regional planning was not accepted without struggle, although it is obvious that private initiative could not deal alone with problems of such scale. Furthermore, age-old prejudices, which should change, do so in fact: the belief, for example, born out of man's need to support himself on the products of the earth, that land should be the property of individuals; today, when our only bond with the earth is a not so permanent dwelling place, its private ownership constitutes a useless and dangerous anachronism. That is why, in many countries of the world, this ownership has been abolished; land in these instances is the property of the state, which subsequently leases it to individuals for use.<sup>10</sup>

In terms of practical application, social and political developments are still negligible. Yet their importance is fundamental and decisive. For no project involving the unified solution of all the problems relative to man's environment is to be realized unless the social theories and actual organization of the state develop accordingly. What should make us optimistic is the fact that, despite differences in ideologies, despite the application of diametrically opposed social and economic systems, most countries seem to be moving



toward a fairly similar final goal.

In the general study of man's environment, the main tool is regional planning, i.e., a unified and simultaneous study of the problems and future perspectives of an entire geographic area. Regional planning was the outcome of two main observations concerning, first, the manner in which urban centers were progressively spreading, and the interdependence of city and surrounding countryside, and, second, the effects produced by the interplay of economic, social and urban forces. To approach each of these separately proved impossible, the only solution was to include them in a common research program. The need for regional planning has now been recognized by many countries, and has been adopted by international organizations such as the United Nations. Unfortunately, only a few of these countries possess the instruments that would enable them to plan on such a large scale. Moreover, experience in the domain is still limited and rather vague.

Regional planning presupposes the close collaboration of many experts, such as the economist, the sociologist, the architect, the psychologist and of many specialists. This is its most important advantage: the possibility to study each problem from all angles, and at the same time to check and control the multiple repercussions of each solution. But extensive collaboration is also the cause of the greatest difficulties. For all these sciences have as a rule developed in watertight compartments, with separate techniques, methods, and terminology. Even their relative importance in the realm of regional planning is yet vague and undefined. In the next few years, these differences must be eliminated and new common methods worked out.

The realization of regional planning projects naturally depend upon the attitude of state authorities, at least in what concerns the economic and managerial aspects of the question. The technical application, on the other hand, will be rendered easier by the new technological developments. Methods arising from the production of manufactured goods can be used with profit in the construction of the big projects that regional planning will necessitate. Standardization, for example, which today constitutes a basic condition for industrial production, is little known in the domain of building construction; as a result, the possibilities for mass production and prefabrication of building elements are still limited. Likewise, automation and the various systems for analyzing and checking production output are not yet employed greatly in the domain of construction.

During the last two hundred years, the technological developments were rapid and spectacular. In 1830, the annual world production of electricity was 200 million kilowatts; in 1960, it attained 30,000 million. The stagecoach could travel 12 km per hour; the automobile today may reach a speed of 200 km per hour, the airplane attains 300 to 700, the rocket-propelled jets 3,000, and the rockets themselves 40,000 per hour. Between 1700 and 1960, the enlargements obtained with the microscope increased from 200 to 300,000 times.<sup>11</sup> Comparable developments could be cited in most domains. Contrariwise, the developments in building construction, though quite perceptible, are still limited. In the near future, therefore, in order to face the immense problems of man's environment,

building construction will have to use radically new methods, will have to get rid of all traditional systems and preconceptions.

#### 4. The Role of the Architect

In this extensive effort to create a suitable environment for man, the architect is going to play a very important role. But he must first train himself and acquire new skills, in order to be able to cope with the new problems.

We can already discern the factors of change around us. The social or individual needs, which the architect is asked to satisfy, are becoming more complicated every day. In the past, he used to build one building for one individual; now he studies a complex of buildings, programmed by a service, financed by one organization, controlled by another, destined to house an unrelated group (for example, school, hospital), and bound to affect in a manner yet unknown a whole urban sector. Thus, not only is the object of the architect's study enlarged (building, group of buildings, housing development, city, region), but the social repercussions of his work are also becoming more apparent, and as projects become more important, the smallest error may prove disastrous.



Leaf: *Liliodendron Tulifera*

Furthermore, in the new architectural creations, the form, the function and the structure of the building will be fused into an organic whole. As in the case of a leaf or a shell, it will be impossible to decide whether the final result was determined by function, or by the laws of statics, and which was the source of its form. For this reason, the architect, as the main creator of forms, will not be able to rely entirely on the collaboration of the engineer or the sociologist, but will have to acquire himself the ability to analyze and synthesize function and structure.

In this manner, the architect's work is already changing. But what will his role in the general effort for study and programming be? Naturally it will, to a certain extent, depend upon his training and abilities. Two things are certain, however, in spite of arguments to the opposite effect. First, that his main role will continue to be one of synthesis. Second, that the object of his study will not be determined by size, scope, or nature.

Every project, regardless of size, goes through three main stages. The first consists of analyzing and determining the needs it must satisfy. During this stage, the human demands are recognized, the social, economic and technical repercussions are evaluated, past experience is studied again, and related solutions are compared. The second stage

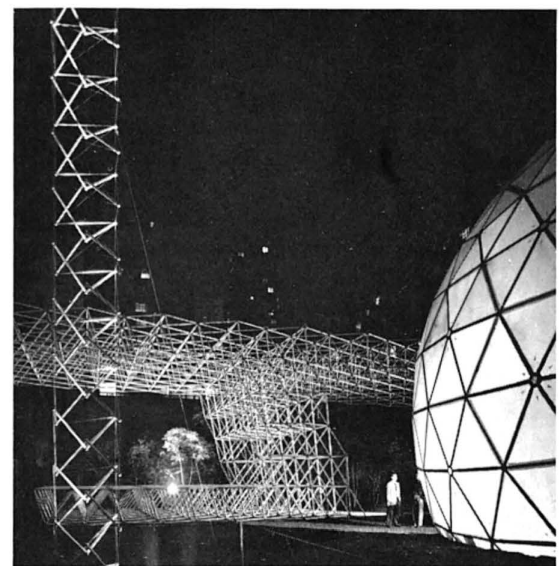
deals with the design and description, through plans, tables, etc., of formulated solutions that cover the needs determined by the first stage. The third stage is the stage of realization, of translation from the representation of an object to the object itself. These three stages—analysis, synthesis, realization—must be followed in every project, whether it be an object of everyday use or an entire city.

In all three stages, many specialists work together. But the responsibility of each varies from stage to stage. During analysis, the various experts play the principal role, while the architect follows the course of study, and coordinates and selects the findings. If the project is a chair, for example, the specialists study the anatomy of the human body, the properties of the various materials, the possibilities for industrial production and market absorption. In the case of a city, the geologist, together with the climatologist, determine the most appropriate site, the topographer draws the maps, the economist studies the economic situation, the sociologist the resulting social patterns, other experts check questions of transportation, soil, water supplies, etc. During all this time, the architect plays a secondary role, consulting with the specialists, and familiarizing himself with all the facts.

The second stage, that of synthesis, is handled exclusively by the architect. Naturally, his collaboration with the various experts does not stop. But the initiative and the responsibility are entirely his. It is he who will translate the anatomical data and the materials at his disposal into a chair. It is he who will design the city, relying of course on the precious information already assembled. The architect will be the form-giver, regardless of the scale or importance of the project. And this will be so not because it is his right or because it has become an accepted habit, but simply because he alone is capable of doing it. Only the architect is taught how to synthesize, i.e., how, starting from a vast number of seemingly incompatible prerequisites, to work out a common solution which gives satisfaction to all. Only he has the ability to translate the abstract into concrete and tangible forms. Only he, beyond the cold logic of statics, can create works that are beautiful (a useful quality) but also alive (an indispensable one).

During the third stage, that of realization, the initiative belongs neither to experts nor to architect. If the project is an industrial product, its

B. Fuller: *Dome and structures*. Photo by A. Georges



fabrication will be entrusted to a worker, a machine, or a factory mechanic. If it is a building, it will be erected by a contractor. If it is a city, it will be constructed by the state, or by the local authorities. Naturally, even at this stage, the architect, the engineer, the sociologist, the other experts, are not completely estranged from the project. They follow the progress of the work, they examine and check the methods of fabrication or construction, and after it has been turned over to use, they criticize and evaluate the efficiency and soundness of the initial analysis and of the synthetic solution which was based upon it.

This will be the role of the architect in the future. He will be a member of the team assigned to the study of man's environment. He will collaborate on an equal basis with the other experts for the determination of conditions and needs, and again later, during the stage of realization and evaluation. In the stage of synthesis, however, the responsibility and initiative will fall entirely upon his shoulders. The history of city planning in recent years proves that it cannot be otherwise. For when the architect was left alone to design a city, without help from the sociologist or the economist, the result was a beautiful, but lifeless environment.



Lucio Costa and Oscar Niemeyer: Brasilia

When, on the other hand, the sociologist or economist was given free hand, the result was a tightly organized hell. In order to succeed in the difficult role the future will assign to him, the architect needs better training and education. In the past, he only learned architectural composition, the rules of aesthetics, and the orders of antiquity. The revolution wrought by the modern movement tried to reconstitute the balance between function, structure, and form. At the same time, technical developments in building construction forced the architectural schools to include in their curriculum theoretical and practical courses in engineering, chemistry, statics, materials, air conditioning, etc. This broadening of architectural education has not yet been adopted by all schools, however strange it may seem: in many cases, technical lessons are entirely unknown, and elsewhere taught in such a cursory manner that they can really be of no use at all. Thus the architect is often sent out to deal with the incredible complexity of modern building possessing, as his sole equipment, a few compositional formulae and a large number of dimly understood theories.

The technical and synthetic and aesthetic education of the architect is nevertheless not sufficient. It must be completed with more general courses in the humanistic disciplines. He must be taught

sociology, psychology, political science. Naturally he is not supposed to become an expert in these fields. But he must learn to understand their terminology, so that he may understand, and communicate with, his future collaborators. It cannot really be argued that he has no time; the years of study could be prolonged, possibly after graduation. After all, the doctor's training lasts ten years; and his work is no more difficult or responsible than the architect's.

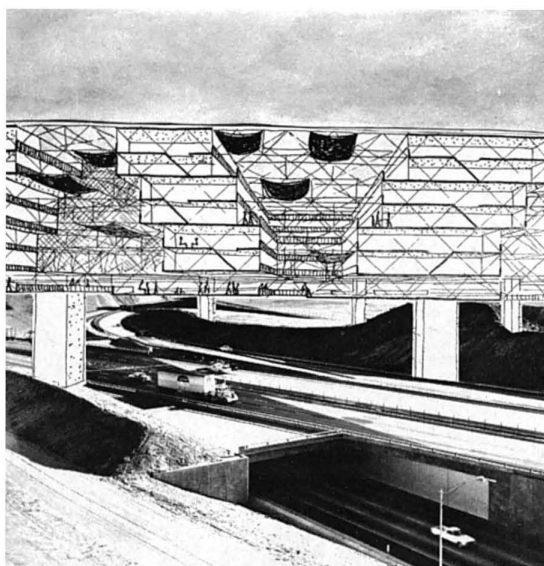
The changes in architectural education must take place immediately. The students of today will tomorrow be members of the teams engaged in the study of man's environment. If they are not suitably equipped, they will either be incapable of doing their work correctly, or will be obliged to abandon it to the hands of unfit persons. In both cases, the harm done to humanity will be very grave.

### 5. Perspectives

When one thinks about the future, it is difficult to avoid seeing visions or making predictions. What will our cities be like at the beginning of the next century, what form will our buildings take? A great number of pioneer proposals have already been formulated.

In the case of the city, the pressure of overcrowding will push it in various directions. The new city may expand horizontally, either in a single direction (linear cities) or in many (two-dimensional grids). It may expand over the sea, or the lakes; it may utilize the underground. It may also expand in space. In this last case, the cities will grow either in single giant units, housing thousands of people, or in three-dimensional structural grids. Their construction will be facilitated by the use of light materials in tension, and by new sources of energy for horizontal and vertical circulation. All these ideas are capable of realization, and have already been studied to a certain extent. But although the technical means exist, it is not probable that realization will come soon. The new cities that are built today are still based on ideas first discussed fifty years ago (for example, the separation of pedestrian and vehicular traffic). Perhaps this delay is due to a dislike of the large scale that is inherent in all pioneer proposals. The concentration of thousands of people in a single building still frightens contem-

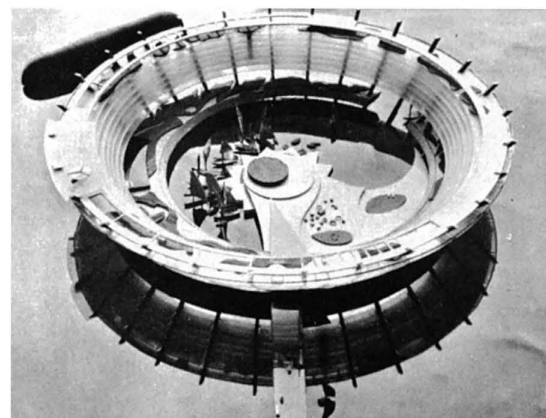
Yona Friedman: Infrastructure



porary man. And perhaps his fear is not without foundation.

The city is a living organism. One that is born, grows up, passes through periods of glory and decline. Every individual, every generation, leaves its mark upon it. It is moulded by its inhabitants, it does not merely contain them. And this is perhaps where the root of the present fear lies. For the city of the future will not be moulded by man in the course of time. It will be studied and designed by a team, constructed by the state, then colonized by its population. To a lesser extent, this is also true of the new housing schemes that are being built today.

But where does the solution lie? Should we abandon our cities to their fate, let them drown in a sea of people and cars? Perhaps the most sound solution would be to abstain from creating new cities, and instead design with care the foundations, the substructure, upon which the city of the future would grow by itself, organically, as the product of its inhabitants' will. The frame of the city (on the ground, the sea, in space, no matter) would be constructed from the very beginning. It would contain all circulation, electrical, heating and air-conditioning systems, as well as the public



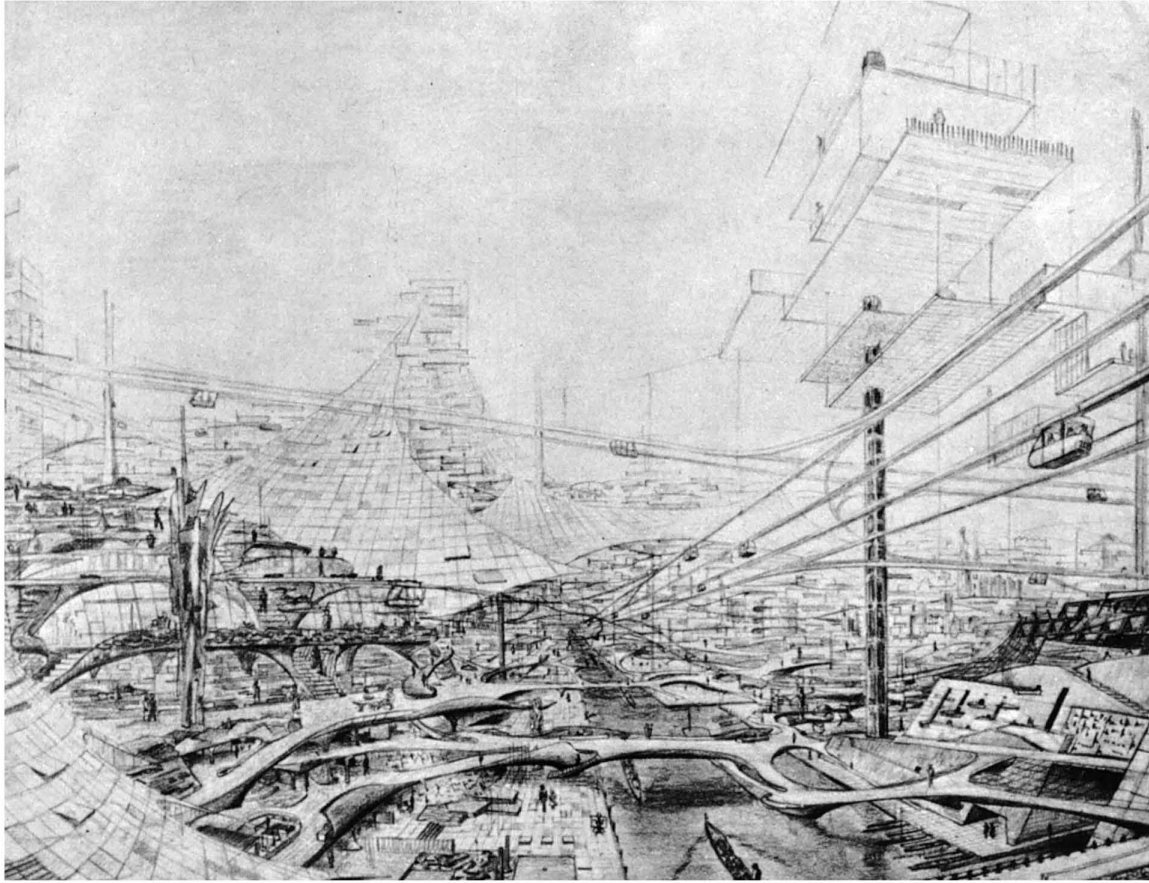
Paul Maymont

buildings. Within this frame, the individual houses, factories and other structures would be incorporated according to predetermined rules, which would however be susceptible of change. When the need would arise for the city to grow, after the empty spaces provided in its frame are filled, the frame would be the first to expand. Thus, the birth and growth of the city would be a complete creation of the design team and the inhabitants.

In a future city of this kind, there would be no buildings as we understand them today, i.e., as independent volumes sitting on the ground. Within the frame of the city, the buildings would be a condensation of matter. The materials used would have to be very light, and would allow low-cost construction. Steel in tension, aluminum, membranes of synthetic materials, would substitute for more heavy materials. Their forms would be curved, for greater economy. The reign of the right angle would end; its place would be taken by catenary curves, whose applications require a new geometry, and of course a new architecture.

Art in architecture, as we understand it today, would also disappear. Let us not shudder at the possibility of such a loss. We must prepare ourselves for the change. Today, by "art" we mean the arbitrary, personal element that the architect-





Frei Otto

artist impresses on his creations. This element concerns the form of the buildings, in its totality as well as in its details. It is true that other factors intervene, considerations of structure and function. But the arbitrary element of personal interpretation is still the most prominent one, and explains why architecture is an art.

The possibility of arbitrary selection among forms and solutions is caused by the use of materials in very low economy coefficients. We take advantage of only a fraction of the potential of our structures. The column of reinforced concrete is designed in many different ways because we use only part of its strength. The beam is by nature an expensive abstraction. But whenever materials are exploited to the limit of their physical potentialities, then form is determined by a relentless logic. The form of steel members in a building by Mies van der Rohe is the result of the designer's will. But in the case of a modern jet plane, form is to a large extent determined by the resistance of the metal to enormous vibration forces, and air pressure, by the need to radiate the heat of friction, and by other physical factors. The building of Mies and the jet plane are both beautiful. But the former is a work of art, while the latter is closer to nature, and has the necessary beauty of a leaf, or a sea-shell.

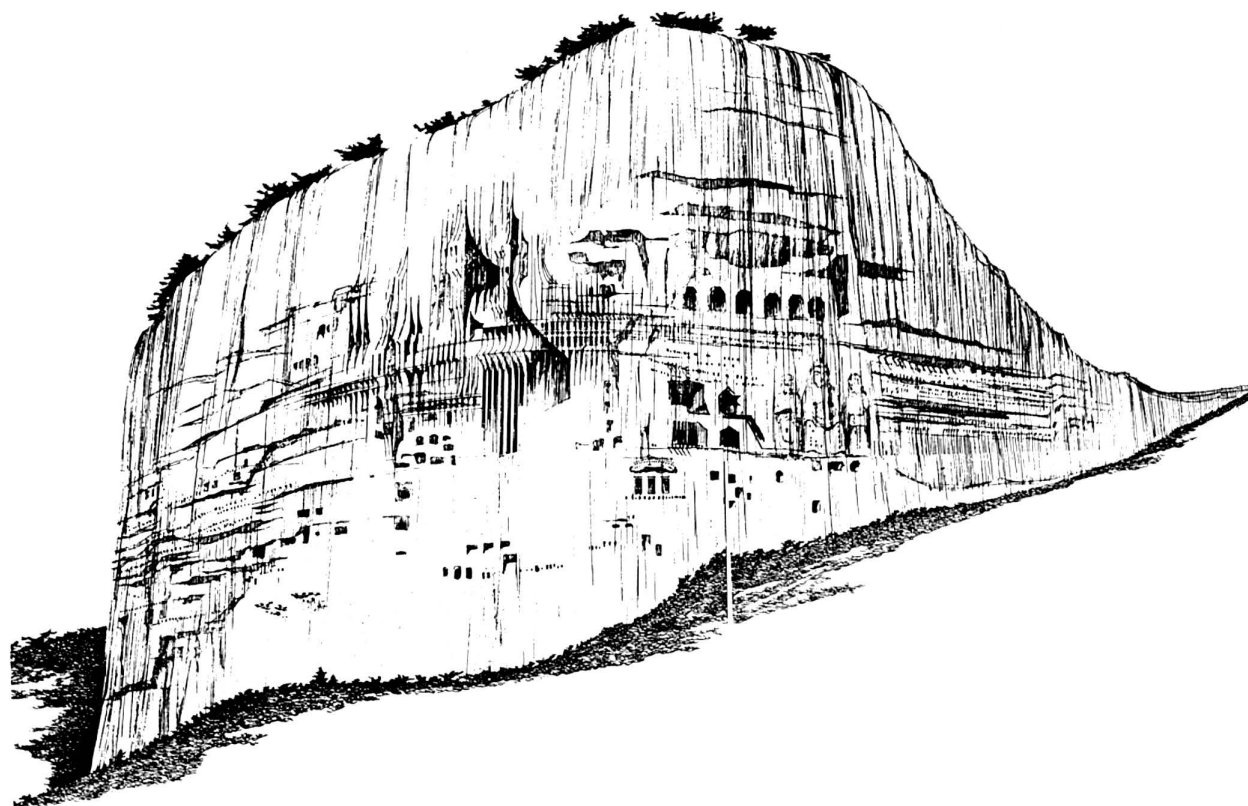
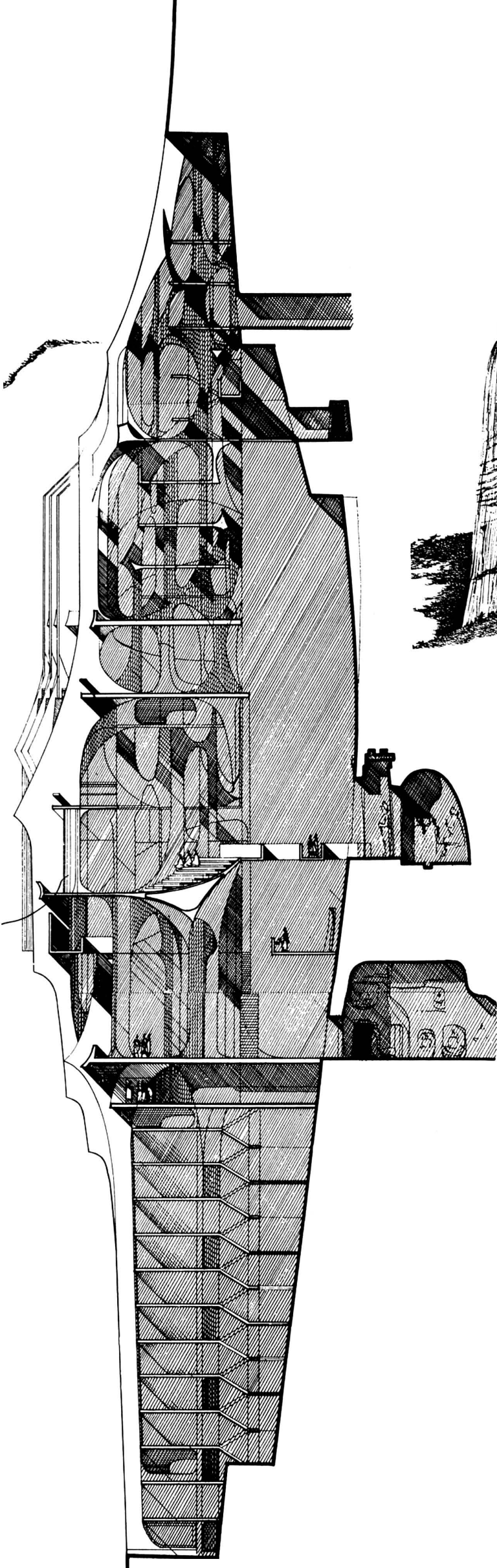
This is the direction future architecture will surely take. In order to solve the problem of new cities and over-crowding, it will be forced to exhaust all the potentialities inherent in modern materials. This will prohibit arbitrary selection of forms; for a cable or a membrane always assumes the same forms. Such compulsory forms will characterize the architecture of the future. The buildings and cities will be beautiful, but in the manner a pebble, or a flower is beautiful. Architecture will no longer be an art.

## Footnotes

1. Source: United Nations Secretariat, Population Studies.
2. Source: Population Index, Vol. 28, No. 1, Jan. 1962.
3. Table 2: Development in Human Activities, USA:
 

	Primary Occupations	Secondary Occupations	Tertiary Occupations
1820	72.8%	12.0%	15.2%
1850	64.8%	17.6%	17.6%
1870	53.8%	22.6%	23.6%
1900	37.4%	29.0%	33.6%
1910	31.9%	31.0%	37.1%
1920	26.7%	33.2%	40.1%
1937	25.4%	28.8%	45.8%
1940	19.3%	31.1%	49.6%
1950	14.0%	31.0%	55.0%
1960	10.0%	30.0%	60.0%
4. A fact first underlined by Walter Reuther, president of the Union of Factory Workers, USA. See Fourastié: "La Civilization de 1975", pp. 33-34.
5. Table 3: Consumption and Expenditures, 1950:
 

Country	Expenditures in Dollars	Per Cent			
		Food	Clth.	Housing	Others
U. S. urban	1,270	31	12	27	30
U. K. urban	620	33	10	21	36
N. Italy, urban	455	42	19	17	22
S. Italy, urban	235	52	18	11	19
Japan, urban	160	45	11	11	33
Egypt, rural	95	68	—	32	—
India, urban	90	53	7	9	31
India, rural	60	66	7	8	19
6. About 10%, according to Fourastié's calculations.
7. Mexico, October 1963: Congress of the International Union of Architects.
8. "A factory must fulfill two functions: first, an economic one—to produce certain objects; second a social one—to create a pleasant and comfortable environment for the people gathered under its roof" Circular issued by Western Electric, USA.
9. The number of working hours per week has progressively decreased, from 50 or 60 at the turn of the century, to 40 hours today.
10. For example, in Switzerland land occupancy and exploitation is limited to 99 years.
11. Source: Louis Armand and Michel Drancourt: "Plaidoyer pour l'avenir".



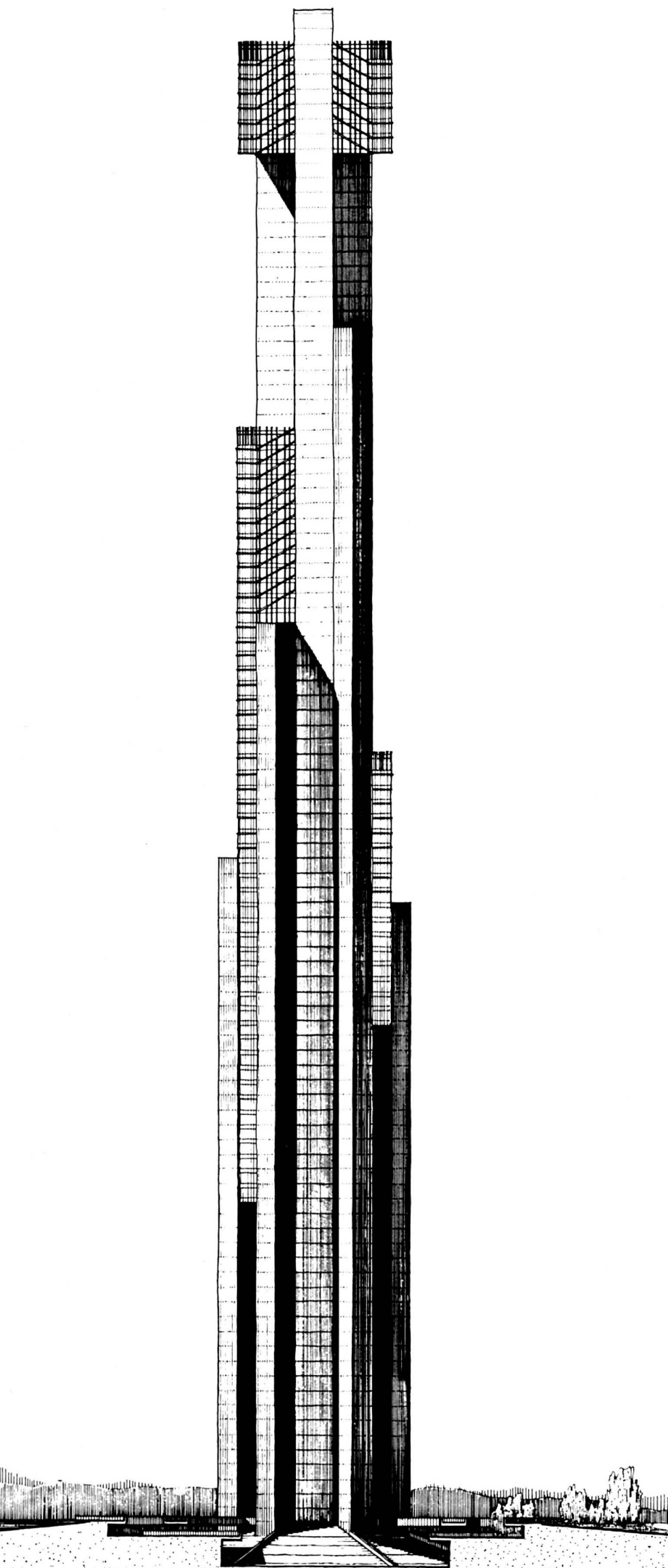
## PARIETAL ARCHITECTURE BY BERNARD TREY

The forms of today's building are limited by the concept of horizontality with structures based on flat ground or adjusting to sloping land by tiered or suspended horizontal levels. In this study for a spiritual, philosophical and artistic community, a new form of habitat is envisioned—one which would be built into natural vertical walls.

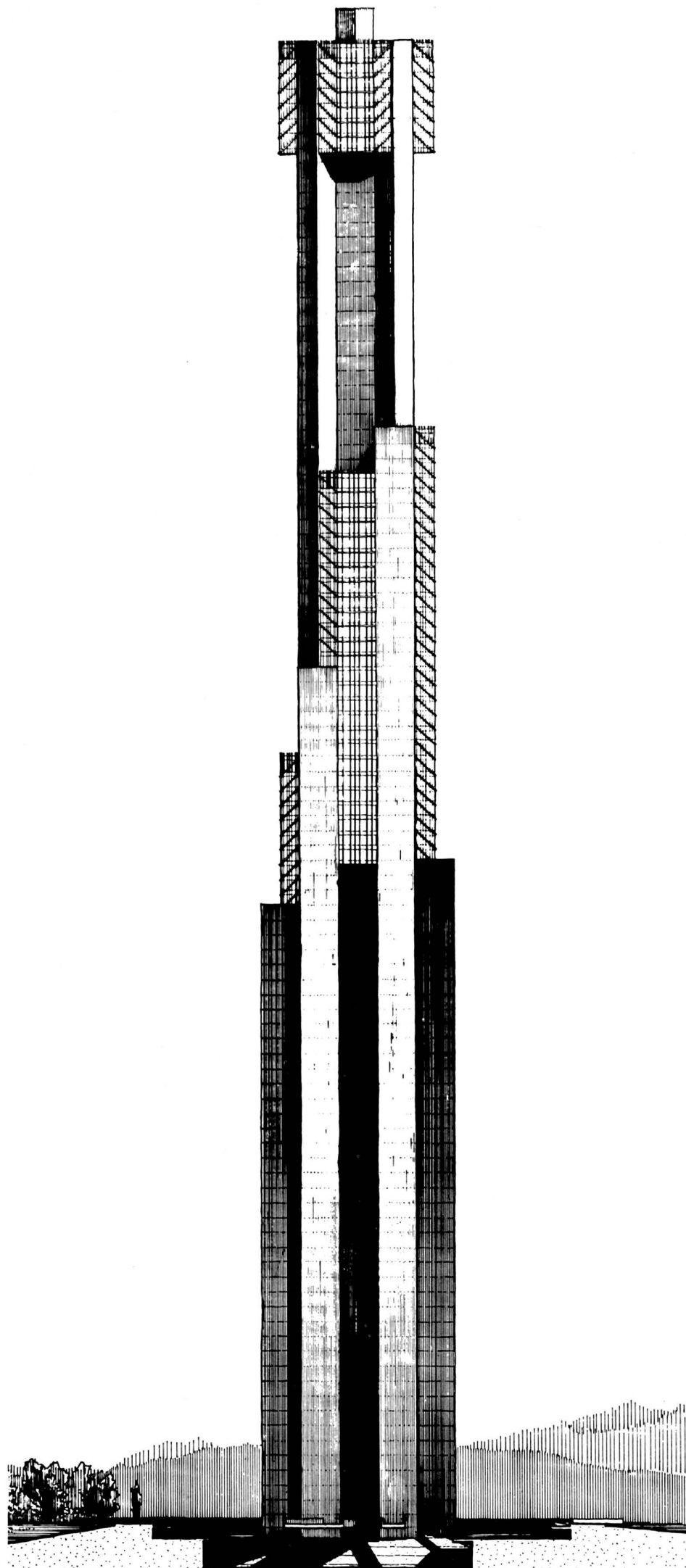
The site selected for application of previous research in parietal architecture was the rock of Mai-Tchi-Chan in the province of Kansou, northwest China. Surrounded by a chain of crested mountains, the gigantic rock rises more than 600 feet. Huge statues of Buddha and his disciples appear on the walls, while several hundred grottoes excavated in the rock shelter the richest treasures of Chinese Buddhist sculpture and painting discovered in recent years. In the course of eleven centuries, the rock has received poets and thinkers in great numbers, so that this proposal merely restores Mai-Tchi-Chan to its former role but at a contemporary scale.

The parietal habitat would be of the same texture and rhythm as its supporting walls, at the same time layered and hollowed out. The slow movement of light across it and the apparent movement of notches, gaps, gardens and other elements of the facade would give it the changing expression of a face. Concrete would be the best means at present of expressing and executing the dwelling because of its plasticity and suppleness. Lines of force would be reflected by the dense but light structural texture, which is comparable to hollow, fibrous bone tissue and gives maximum strength with the minimum material redundancy.

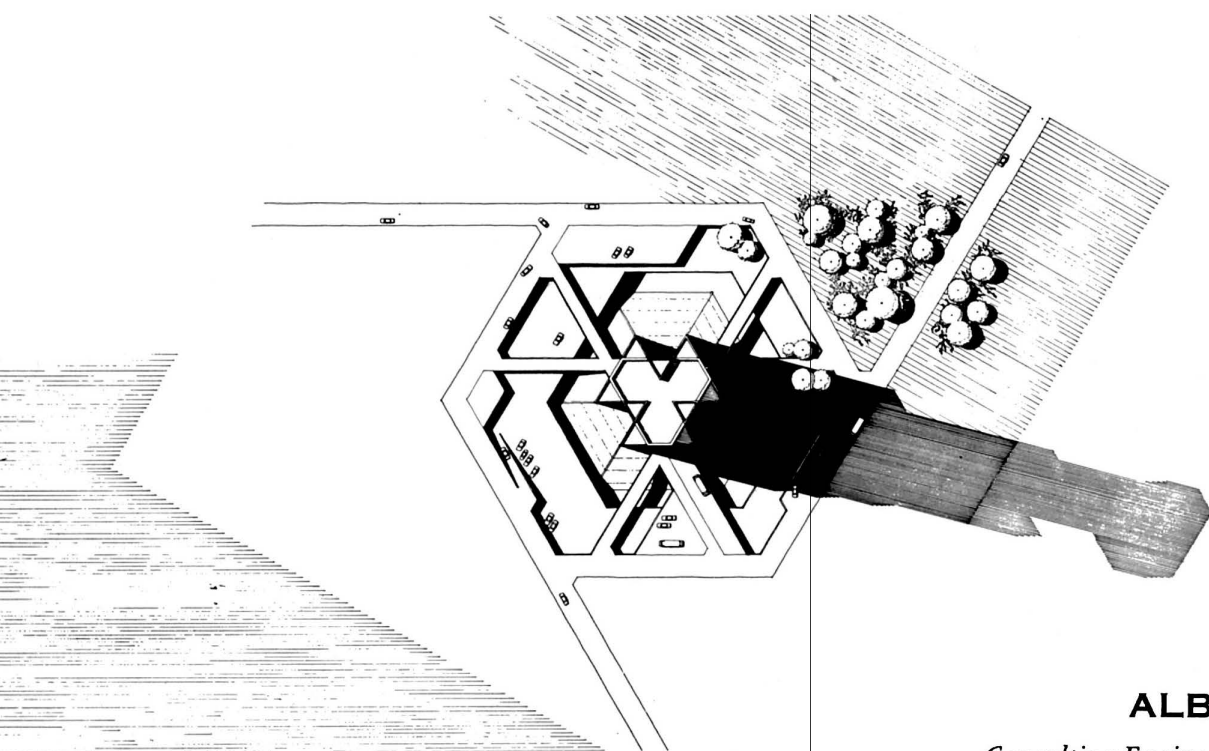




SCALA



SCALA

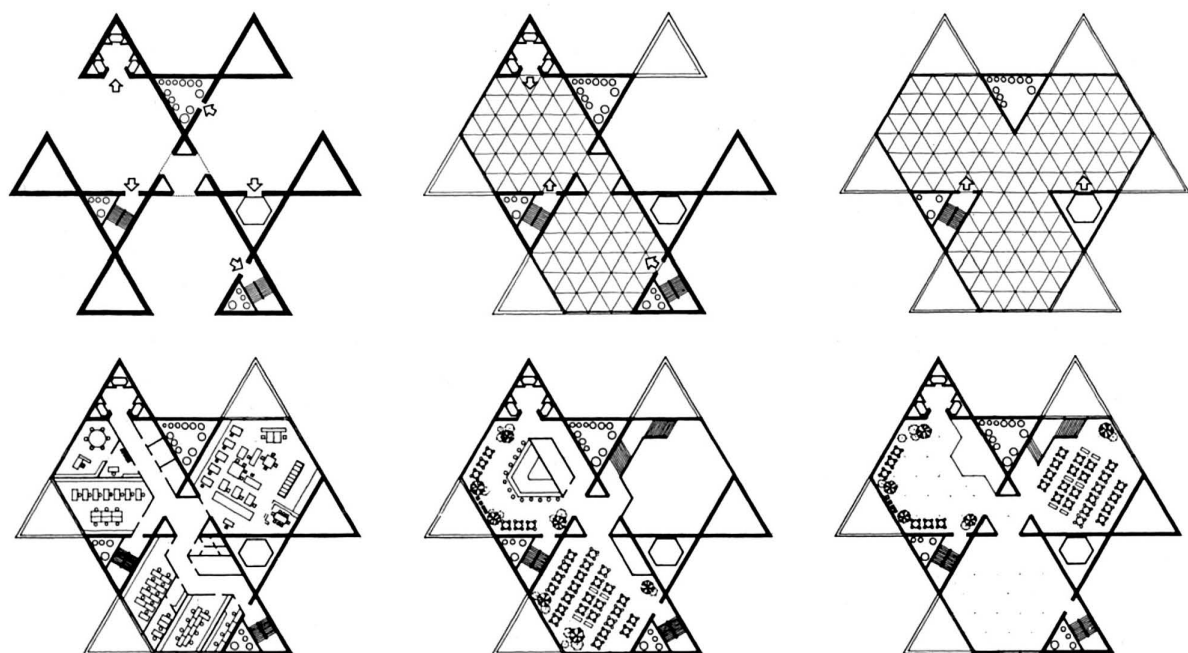


Continuing his study of large-scale structures and their relationship to the city (A&A, Nov. 1964), the architect here proposes a multiple use building 400-metres high. It is Rosselli's conviction that the architect should "aim at the creation of a building whose formation would involve more than the immediate neighborhood and strive to create relations on a more generous scale." In this design for a building or system of buildings which exceed traditional dimensions, the structures would affect not just the nearby streets and buildings but the axes and essential perspectives—the very structure—of the city. Such a system of buildings would be more than an immense enlargement of the city; it would create a new ambience of forms and space at a new scale.

The building's primary function is a technical one with complementary facilities — offices, re-

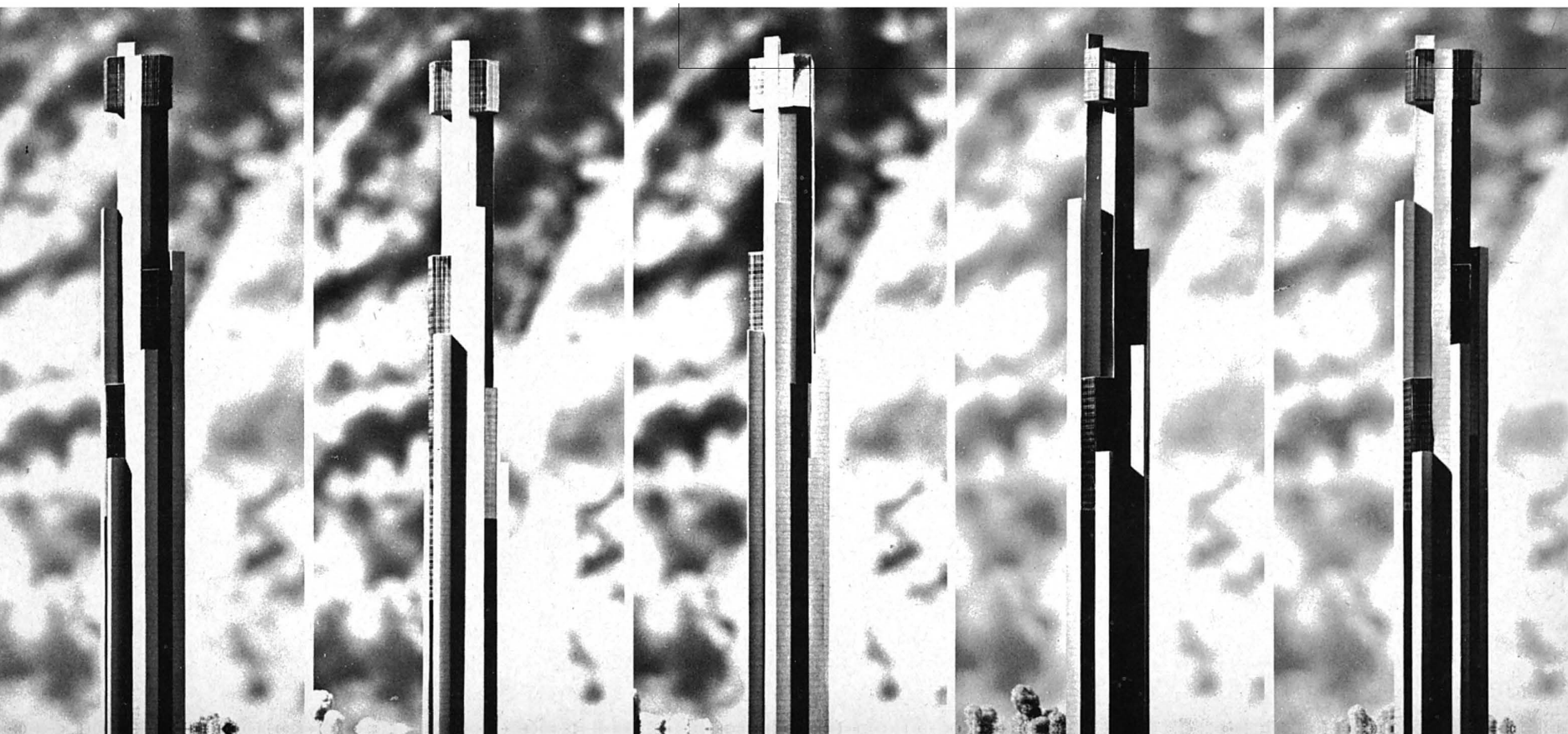
## ALBERTO ROSSELLI, ARCHITECT

*Consulting Engineers: Prof. Piero Locatelli and Mario de Bernardinis*

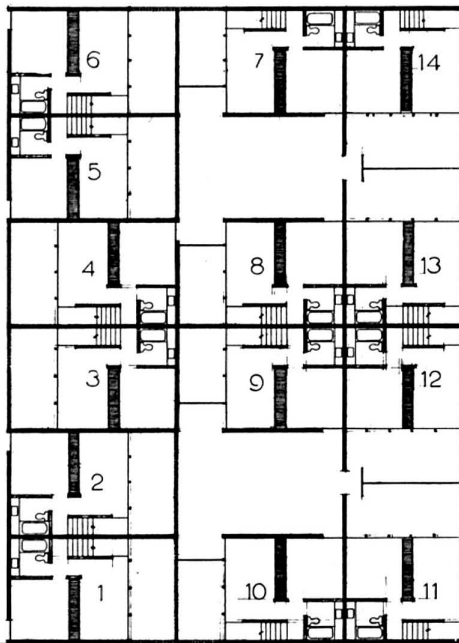
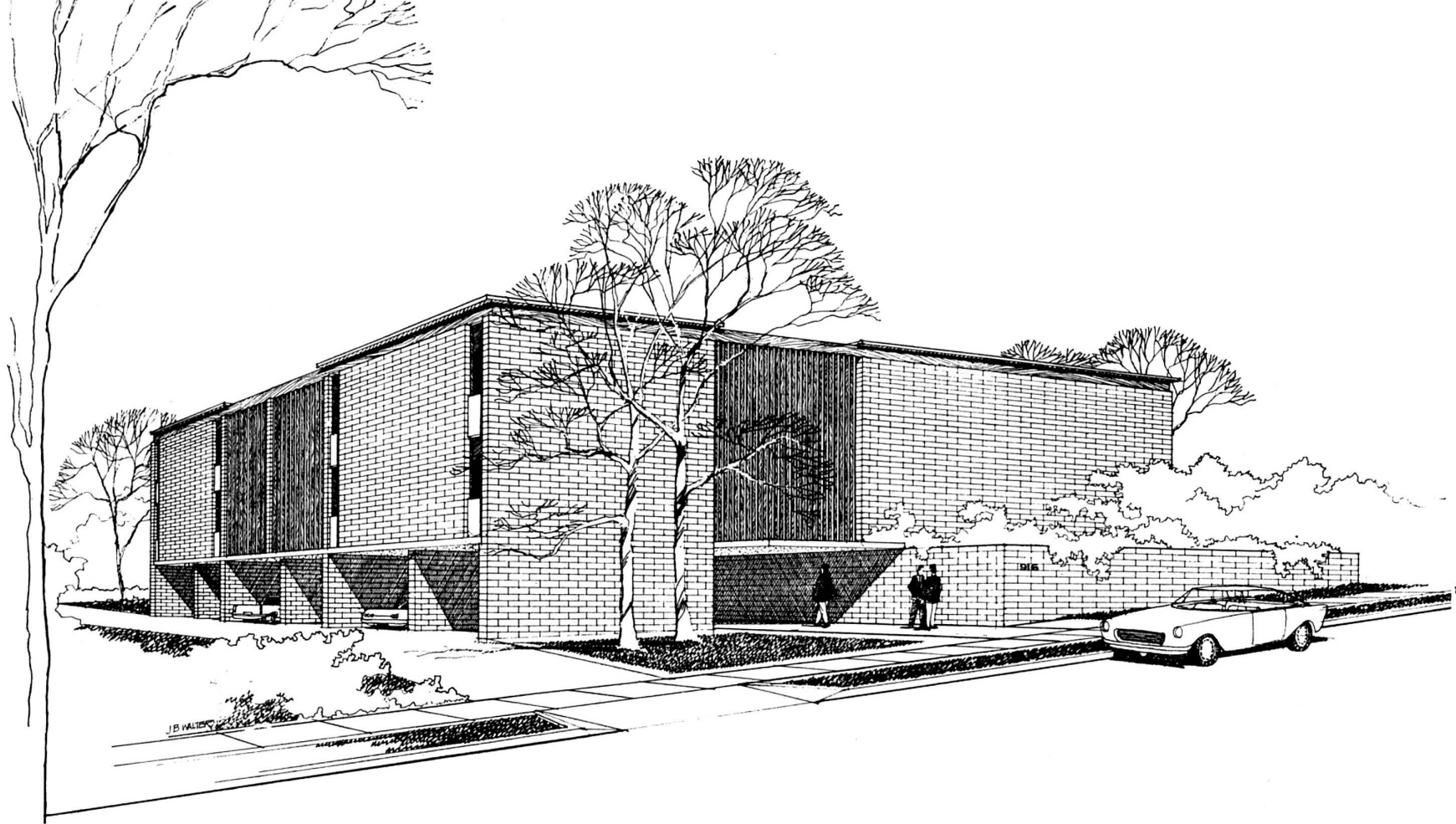


search and study centers. The plan suggests only a few of the possibilities of utilization at the different levels. The base of the structure is 50 m. and the sides of the equilateral triangles, which give form to the vertical concrete ducts, have 10-m. sides.

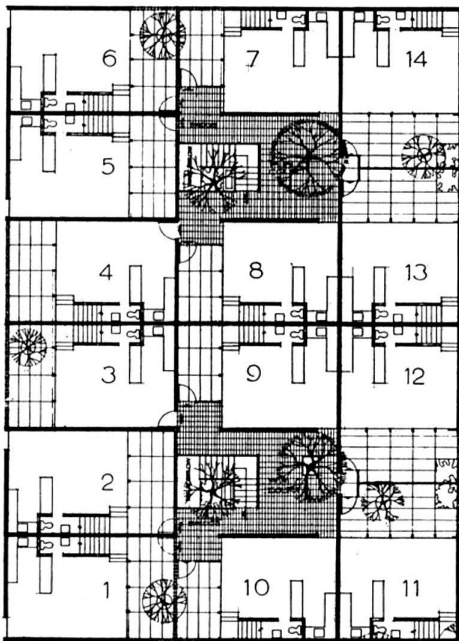
The building is designed in concrete and, in section, consists of a system of walls fitted into a triangle network. The walls form vertical channels rising to different levels. The resulting form exhibits on the exterior a series of spaces which in plan are hexagonal and into which groups of floors related by use can be fitted. There is complete independence between ducts and floors, permitting a flexibility of services to meet that of space utilization. Walls are 60 cm. at the base and 20 cm. at the top. The plumb-line of the walls is at the exterior making it possible to fit steel slabs of the same dimensions at all levels.



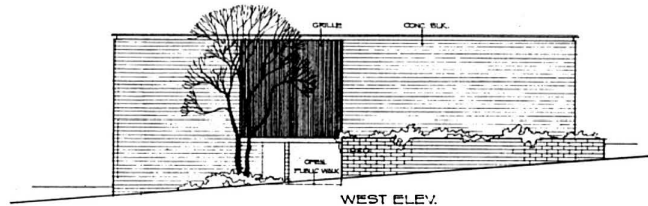




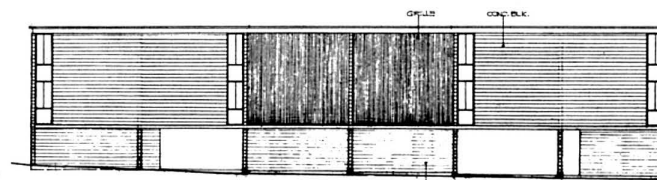
2nd floor plan



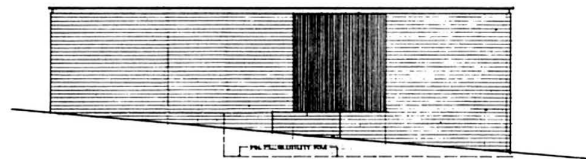
1st floor plan



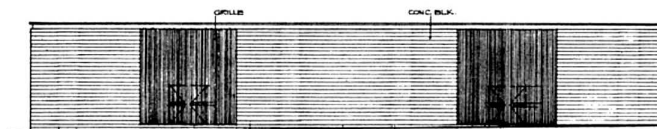
WEST ELEV.



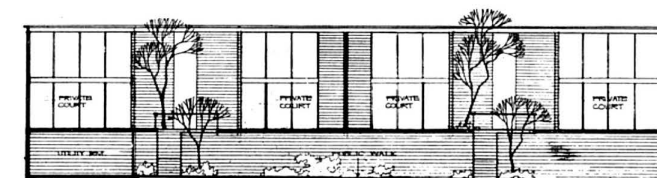
NORTH ELEV.



EAST ELEV.



SOUTH ELEV.



## CARL MASTON, ARCHITECT

This project represents an attempt to solve one of the most perplexing architectural problems of today—to provide civilized urban housing for middle income families in the face of spiraling building and land costs.

Basic objectives of the project, located within walking distance of the downtown Wilshire business district of Los Angeles, were: 1. Maximum privacy, both visual and acoustical. 2. Completely private outdoor living area for each apartment. 3. Integrity in the use of basic building materials.

Approach to the apartments by both automobile and on foot was developed on a lower level allowing tenants and guests to enter the two interior courts by the stairs along the lower passage way, thereby eliminating through circulation at the apartment floor level. Each interior court provides entry to seven apartments.

The patio for each apartment is an integral part of the two story volume that is the basic unit of the total complex. Opening on to each patio on the ground floor are the living room, dining room and kitchen. Occupying a similar space over are two bedrooms and bath. Each apartment unit is enclosed with natural finish concrete block walls on three sides. The fourth side, screening the patios, is a two story high wood grille.

The basic unit of construction is a concrete block 6" x 8" x 24". Treated with respect it can be a dignified and worthy building material. Both inside and out it will be left natural to weather gracefully.

On top of the concrete block walls, acting as roof system is a grid of 4 x 16 wood beams which are creosote stained. The roof decking itself is 3" thick T & G wood planking, stained. First floor concrete floors are to be acid stained and waxed. Second floor bedrooms will be carpeted.

It is painfully apparent to any architect who thinks about it that ninety-five percent of the design decisions for a given building are made before he becomes involved in the project, even with the most permissive of clients. Economic limitations, code requirements, zoning ordinances, structural and material limitations, and tradition—all act together as a set of constraints which severely restrict the range of possible solutions, and which virtually reduce the function of the architect to that of a detailer.

It is also obvious to the thoughtful practitioner that the total of his life's work as a "master builder" will have little effect on the total environment, unless he is so gifted as to have reached the status of "form-giver," furnishing principles and ideas upon which others wish to build, and even then his influence is likely to be thinly dispersed. Perhaps, then, the architect should turn his attention from the five percent of all design decisions he has traditionally made to the ninety-five percent he has not, because the makers of the ninety-five percent are the real molders of the environment.

It is in the constraints themselves that design power lies, not in the detailed working-out of a special problem within them.

Recently there have been published a number of laudatory articles concerning such small triumphs of total environment as the trulli of Italy, the mud villages of Africa, and the structures of the island of Mykonos. But none of these examples were accomplished by a great band of extraordinarily talented designers, nor by a single master hand. Each is the product of numerous untalented builders working within a very rigid set of constraints. Even the most thoughtless of architects could not build unsympathetically in such locations as these, provided he were forced to use the same limited materials and techniques.

The restrictions under which such examples were built resulted in large-scale pieces of good design, better than virtually anything ever done by specific design intent. Furthermore, they allowed not only a certain range within which individual creativity could operate, and within which individual needs could be met in the most direct, spontane-

ous, on-site way; but also the chance for the "happy accident" which occurs so often in the more "immediate" arts of painting and sculpture, and so seldom in architecture.

Forms in nature are produced in much the same way, by allowing responsive materials to be shaped by random forces which must obey certain strict chemical and physical laws. The natural landscape is not "designed" at all; it is allowed to build itself under controlled conditions.

In these few examples and in others like them lie many principles that invite further study. What were the constraints that produced the pueblos of the Southwest, the Illinois Tech campus, the Piazza San Marco, the New York skyline, the Italian hill towns? What were the good results, and the bad? How could one formulate a set of constraints within which a house, a factory, or a city could be "allowed to happen" with the optimum result?

In the future, will the master architects sit at drawing boards?

Have they ever?



## TWO ESSAYS BY EDWARD ALLEN

It is the primary task of a work of architecture to respond to human needs, physical and emotional. It is not the task of the occupant to respond to the configuration taken most conveniently by a piece of building material, nor to a structural span that is especially economical. We must demand at least as much compliance and compromise from the materials of a building as we do from its occupant.

A great number of buildings have been planned on modules ranging between two and ten feet. Such modules are efficient in terms of materials, but for human use they are usually wasteful and inefficient. A modular office building or factory may show little distortion when compared to a modular house or theater, but all are warped in some degree by being forced onto a grid. A truth being learned very slowly is that the only viable modules range upward from twenty-four feet or downward from eight inches. A man can subdivide, modify, and occupy a space twenty-four feet or more on a side; and with pieces eight

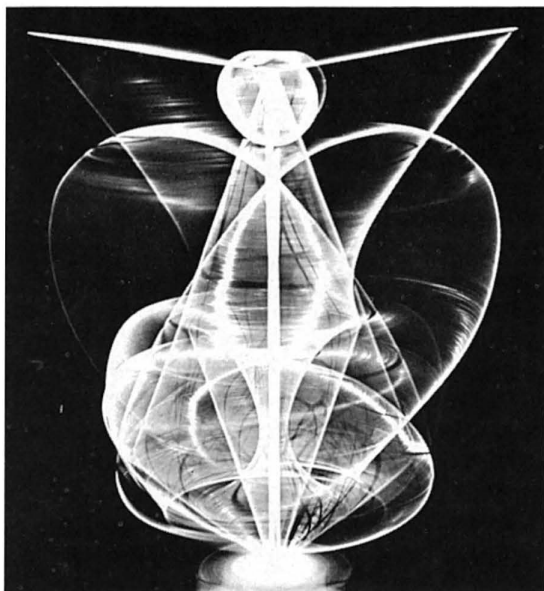
inches or less in dimension he can assemble enclosures of space as he requires. The ideal modules for general use are infinitely large or infinitesimally small—an unlimited clear span, or a molecule.

A material small in three dimensions, as a grain of sand, is the most responsive and least demanding piece from which a building can be built. Such pieces can be joined in an infinite number of plastic ways. A material small in two dimensions, such as a steel wire, a cotton thread, or a two-by-four wood stud, is reasonably responsive if it can be cut to any required length. A material small in one dimension, a sheet material, is responsive only if it can be cut to any desired shape, and then bent, stretched, or molded. A material large in all dimensions, as a large block of stone, or an unmodified piece of space, is responsive only if it can be hollowed out or carved in a plastic way to meet human requirements; or if it is composed in turn of very small particles which can be molded, joined and manipulated at will, as in a ball of wet clay.

The practice of shop fabrication of building components has grown at a rate much slower than was predicted in the early postwar years, and will probably never reach its projected peak, because prefabricated components are closely tied to unresponsive modules by the nature of the machinery which produces them. In the near future we will see a renaissance of site fabrication, as buildings are erected by machines such as the spray gun which are capable of rapid on-site assembly of very small particles of material.

At the same time we will see considerably less structural expressionism. A wall whose functions of load bearing, weather resisting, insulating, and energy-carrying are carefully articulated into distinct elements is not as responsive to human use as to its own internal problems. A material or assembly which can gracefully assimilate all such functions and still let itself be molded into spatial enclosures and light-gatherers, without undue regard for its own nature or dimension, offers infinitely more exciting possibilities.





*"Construction in Movement" 1938, steel, 30"*

The direction of the painter's work has experienced numerous periods and phases. Some are clearly defined, some overlapping and so interwoven as to defy easy classification and analysis. In spite of the various shifts and changes, however, there is an apparent central theme so visual in essence as to nullify verbal expression or explanation.

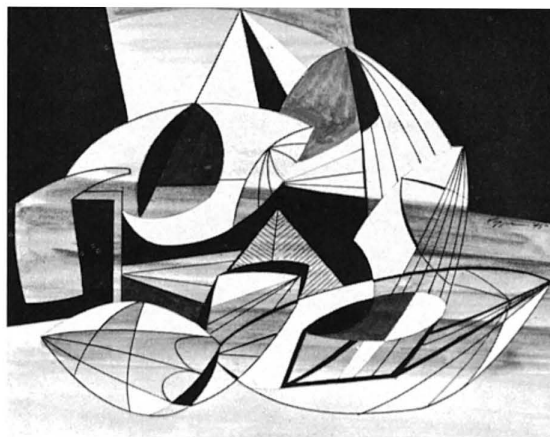
The paintings range from pure hard edged abstractions, carefully planned, to dominantly intuitive works dependent largely on direct spontaneity as well as to particular kinds of subject matter handled in related ways.

Though the principle of polarities does exist, i.e., abstract and figurative works and these can be infinite, it is the influence of one area on the other that evokes renewed interest for development. It is often in these inter-zones where many uncharted voyages and discoveries lie and the polarities may have many references. Though the work does involve such undertakings it remains fluid rather than static and touches on structural organization as well as free organic expression that bring meaning to assert itself.

As one attempts to assess his work over a long time, the idea of progress loses all sense of value. Just because an artist may become progressively abstract or figurative does not establish criteria for value. Mature painters and sculptors, no matter how seemingly inventive they are at certain stages, eventually reach a plateau. Others are innovators to the very end of their lives. Even so, when seen in retrospect, these too are related strongly to their particular times. A sense of discovery, a sense of the new, are poised against the background that nothing really changes since we realize that the thing we discover was really always there. It is important to find the means of bringing an idea or expression into conscious awareness and it is often the shock and excitement of making the unknown known, or bringing the familiar into focus that is essential. The discoveries in art are often a matter of emphasis, dominance, and point of view. This is true not only for a given artist but for the entire history of art.

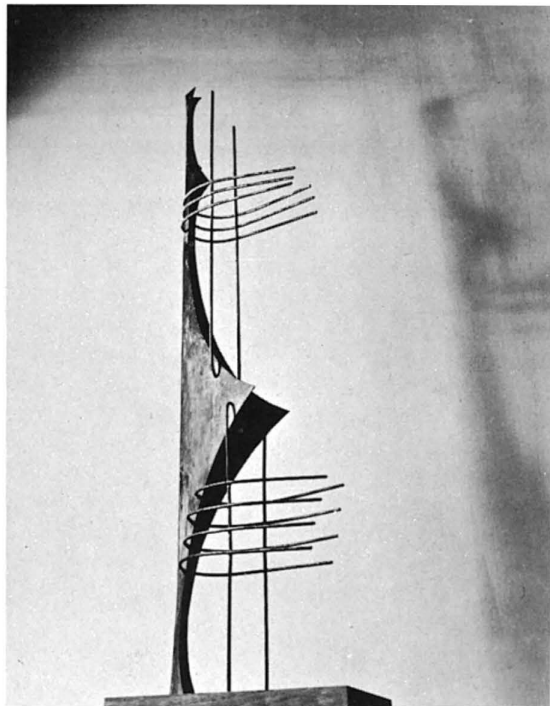


*"Abstraction" 1942, oil, 39" x 59"*



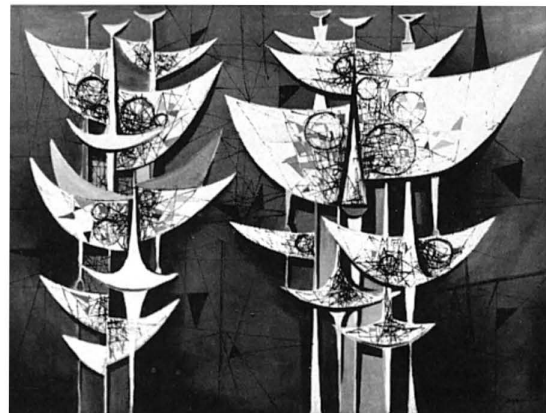
*"Curved Abstraction" 1945, gouache, 11" x 8½"*

*"Figure" 1946, bronze, 20" high*

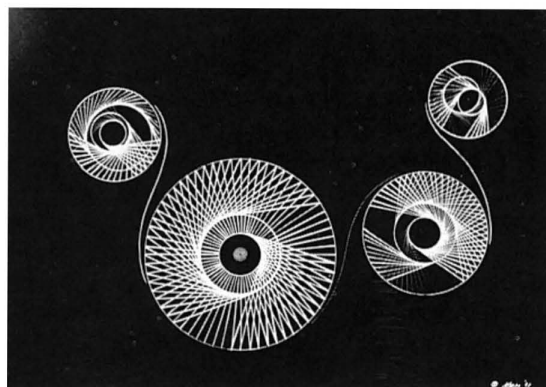


*"Rock Forms" 1947, oil-decalcomania, 23" x 14"*

To deny outside influences is to deny present or past history. To stand alone is often as conservative as to become a part of a larger movement and lose identity. Writing manifestos, taking oaths to certain causes, often long established, sometimes results in only regenerating previous works of art in other ways; perhaps refining them, making them more dramatic, more intense, and more acceptable. Sometimes the only recourse is to isolate prior phenomena so limited as to mistake it for personal discovery.

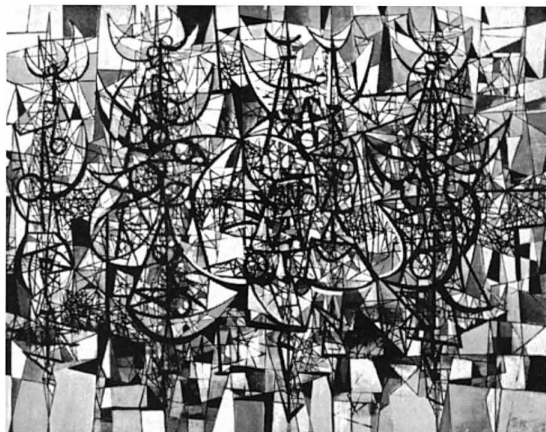


*"Two Totems" 1951, oil, 56" x 42"*



*"Four Wheels" 1951, sketch for a plastic sculpture*

*"Figures" 1952, oil, 66" x 52"*

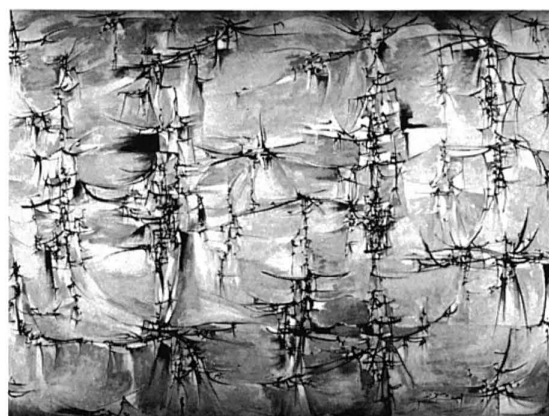


## THE WORK OF RICHARD KOPPE

*This presentation is occasioned by the announcement that Syracuse, (N.Y.) University has established a Richard Koppe Painting and Manuscript Collection. The works shown are selected from the collection which contains more than 680 items by Koppe who is professor of art at the University of Illinois.*



*"Growing" 1951, ink, 20" x 26"*

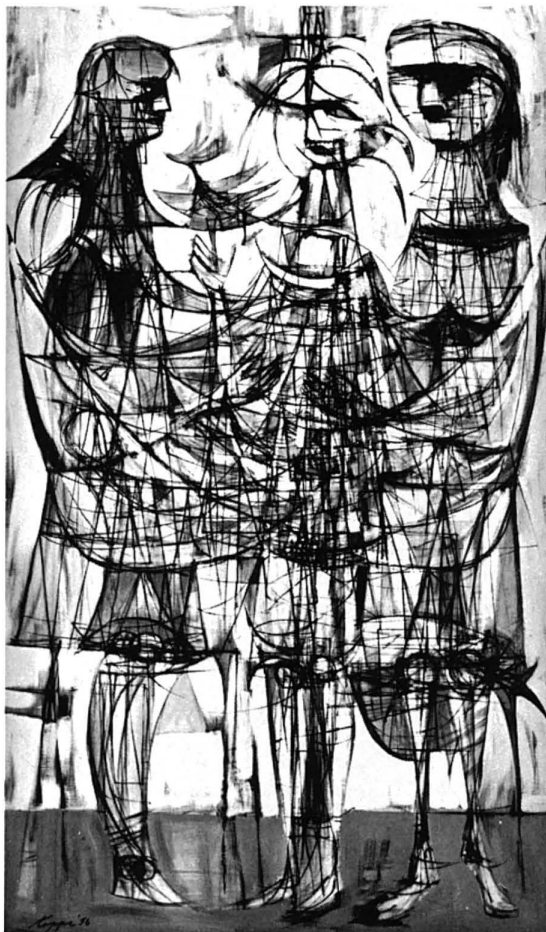


*"Reflection" 1954, oil, 72" x 52"*



*"Shadow Figures" 1955, oil, 72" x 52"*

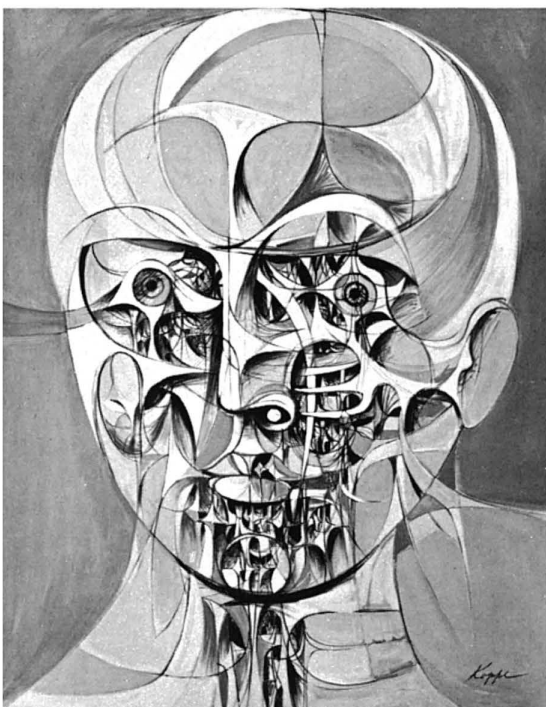
Art has become more abstract at the same rate that it has become more subjective. The abstract artist has become less interested in the outer world of appearances and has represented the inner world of feeling and experiences. Even the reiteration of object oriented painting and sculpture from time to time has these characteristics. This is an age in which art has been influenced by the inter-zones of experience. Thus, painting and sculpture reflect many of the aspects of design, architecture, science, engineering, psychology, industrialization mechanization, the stage, and everyday art and objects.



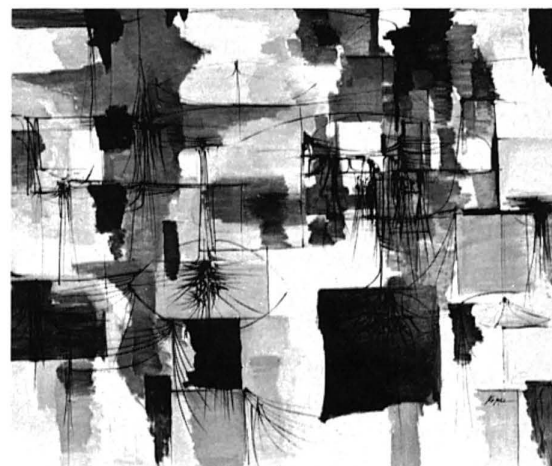
*"Trio" 1956, oil, 42" x 72"*

The microscope and telescope originally extended inner and outer visual exploration of physical matter and yet we have proof of the existence of things within ourselves and the outer world that have never been seen. The artist is no less an explorer in these realms. Art is just as functional as the automobile we drive, the house we live in, the chair we sit in, or the spoon we eat with. Who can deny the function of painting, sculpture, poetry, literature, music, dance, and drama in our lives. We seem to relegate functionalism to certain senses and composite needs; least of all to our emotional and intellectual capacities.

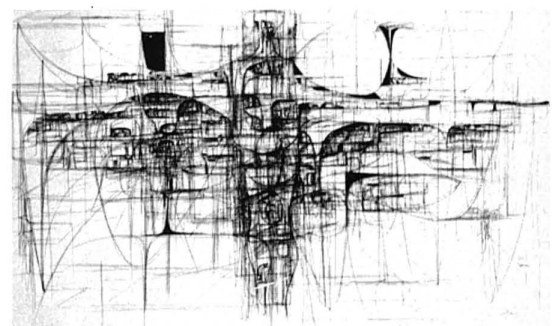
*"Past Portrait" 1961, oil, 42" x 52"*



*"Profile" 1962, plaster for bronze sculpture, 16" high*



*"Exhilaration" 1962, oil, 72" x 60"*



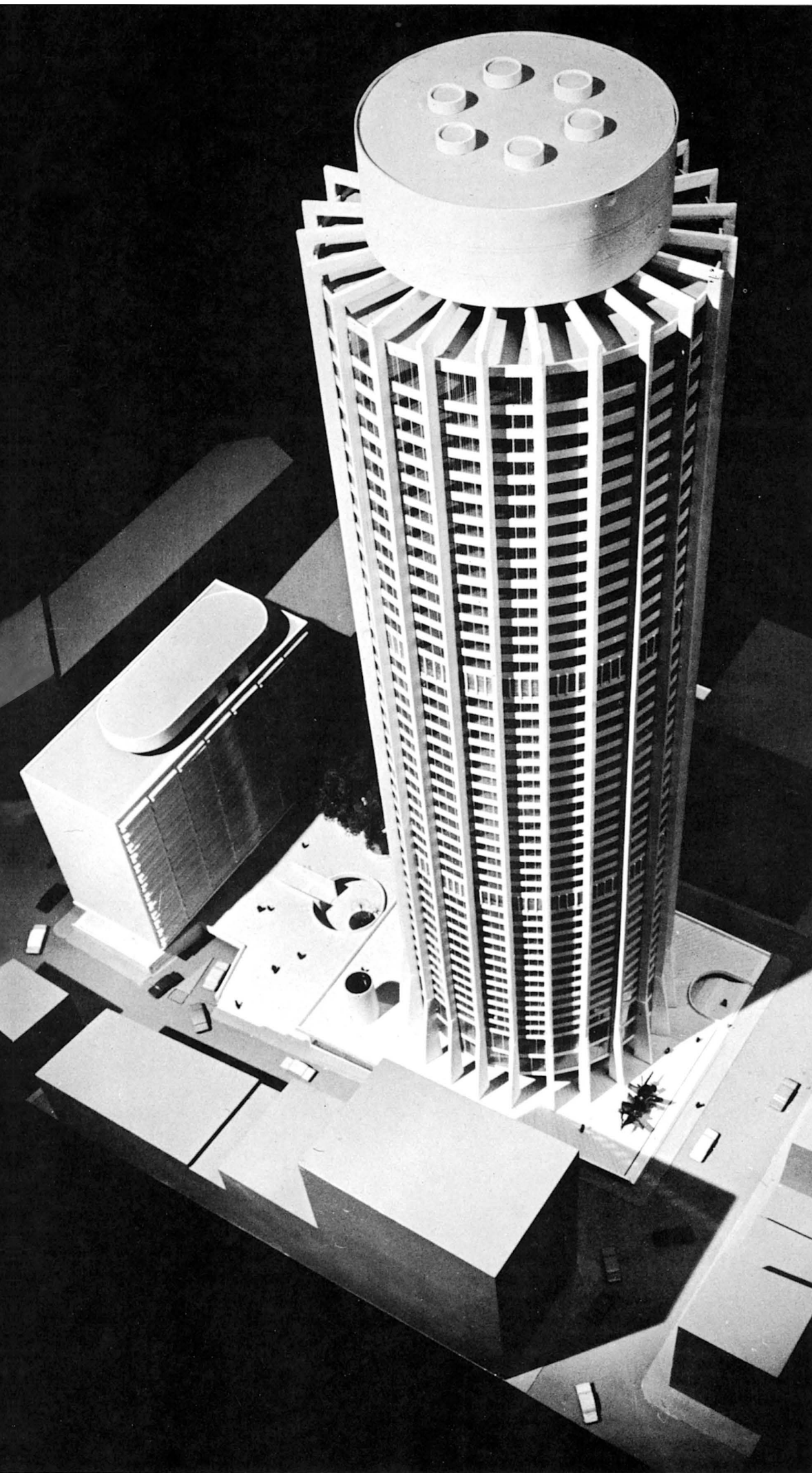
*"Enveloping Figure" 1963, pen and ink, 53 1/2" x 31"*

In terms of communication abstract painting and sculpture offer the greatest and least latitude for interpretation. Unfortunately we have often erroneously relegated communication to verbal, written or printed expressions and substitutes, therefore, as in images, symbols, sign, and signals. Though we see it in pure abstract works of art, the visual language is so direct that we often deny its presence even though abstraction is common to numerous fields. Communication is equally dependent on the ability to perceive.

Richard Koppe



## HARRY SEIDLER AND ASSOCIATES, ARCHITECTS

*Engineer: Pier Luigi Nervi*

This inner city redevelopment scheme in Sydney, Australia, encompasses an entire city block and accommodates two buildings, a 45-story tower and a 13-story office building. Floor space in the project amounts to twelve times the site area, a total of 720,000 sq. ft. of office space, two retail shopping floors, and an underground garage for 400 cars.

Dividing the two buildings is an open plaza, which extends through under the Pitt Street Building and on a higher level under and around the tower to the level of George Street. A large circular opening in the center plaza extends the open space downward into a sunken plaza, a part of the lower retail shopping arcade. In effect, the entire site is open public space interrupted only by entrances, elevator lobbies and stairs. This newly gained open space in the center of the city is developed with fountains, trees, sculpture and outdoor restaurant seating.

The site made a large rectangular office tower unsuitable and a circular form was decided upon to avoid creating objectionable "canyon-type" spaces against adjacent buildings with resulting poor light and a crowded appearance. The building is 133' in diameter and its 59'-diameter core contains sixteen elevators serving groups of floors in three banks, two scissor-type firestairs, toilets and ducts. The office floors are a column-free space of 37' clear span from the structural core to the external fin-type concrete columns, which splay outward at the base of the building to provide wind and structural support. The two bottom floors house an exhibition space and a trade mart. The top floor accommodates a restaurant on two levels with views in all directions.

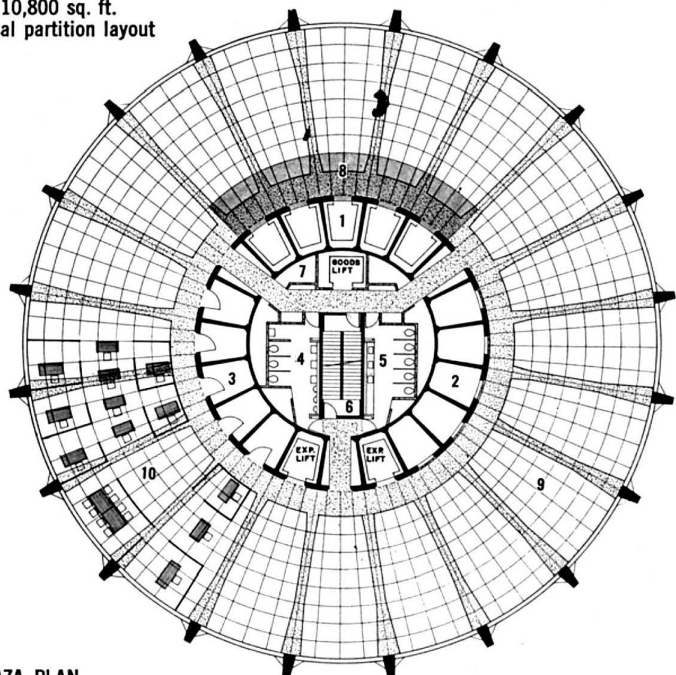
Pier Luigi Nervi designed the heavily loaded first two exhibition floors so as to make visible the natural lines of stress patterns in the dome and floor structures. To form up complex and intertwining lines of ribs by conventional methods would be quite impractical. The few but repetitively-shaped areas between the ribs lend themselves to mass production. These areas are made into "ferrocement" pans of fine mesh reinforced 1"-thick high-strength cement which can be moulded to any shape. When placed on few supports, the areas between them are then poured into curving structural ribs, giving the impression of fine lace-like tracery — and yet possessing remarkable strength and creating a beautiful flowing pattern of curved ribs, which will be visible on the ceilings of the entrance lobby and the main exhibition floor. As for economy—normal beams would have had to be 4'0" deep to carry the 300 lbs. per square foot across the span of 37'0"—Nervi's ribs are only 2'0" deep.

The rectangular Pitt Street Building is supported by four rows of columns. To avoid the many columns obstructing the space under the building, each group of four columns is "gathered" into a tree-like structural tressel. Open space and greatest freedom of pedestrian traffic results under the building.



#### TOWER FLOOR PLAN

1. Elevator serving floor
2. Elevator travelling past to higher tier of floors
3. Storage rooms and ducts in unused elevator shafts of stopped-off lower tier elevators
4. Men's toilets
5. Women's toilets
6. Interlocking scissor-type fire stairs
7. Ducts
8. Lobby
9. 37 feet clear span office space showing radial and concentric partition grid lines. Net floor area 10,800 sq. ft.
10. Typical partition layout



#### MAIN PLAZA PLAN

1. Retail shopping
2. Shopping concourse
3. Escalators down to lower shopping concourse and tunnel to Wynyard Station
4. Parking floors exhaust ducts
5. Sunken plaza and fountain
6. Parking entrance
7. Main plaza extending under Pitt Street Building
8. Entrance lobby

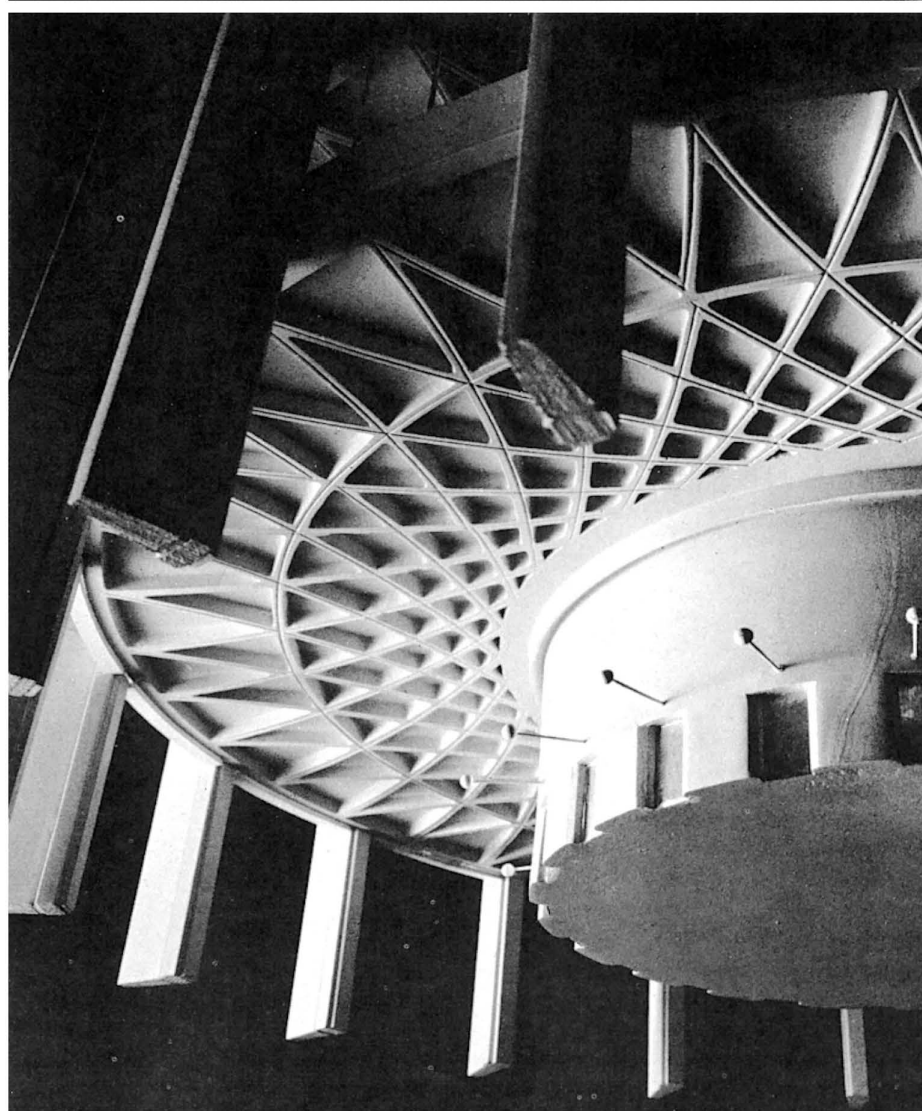
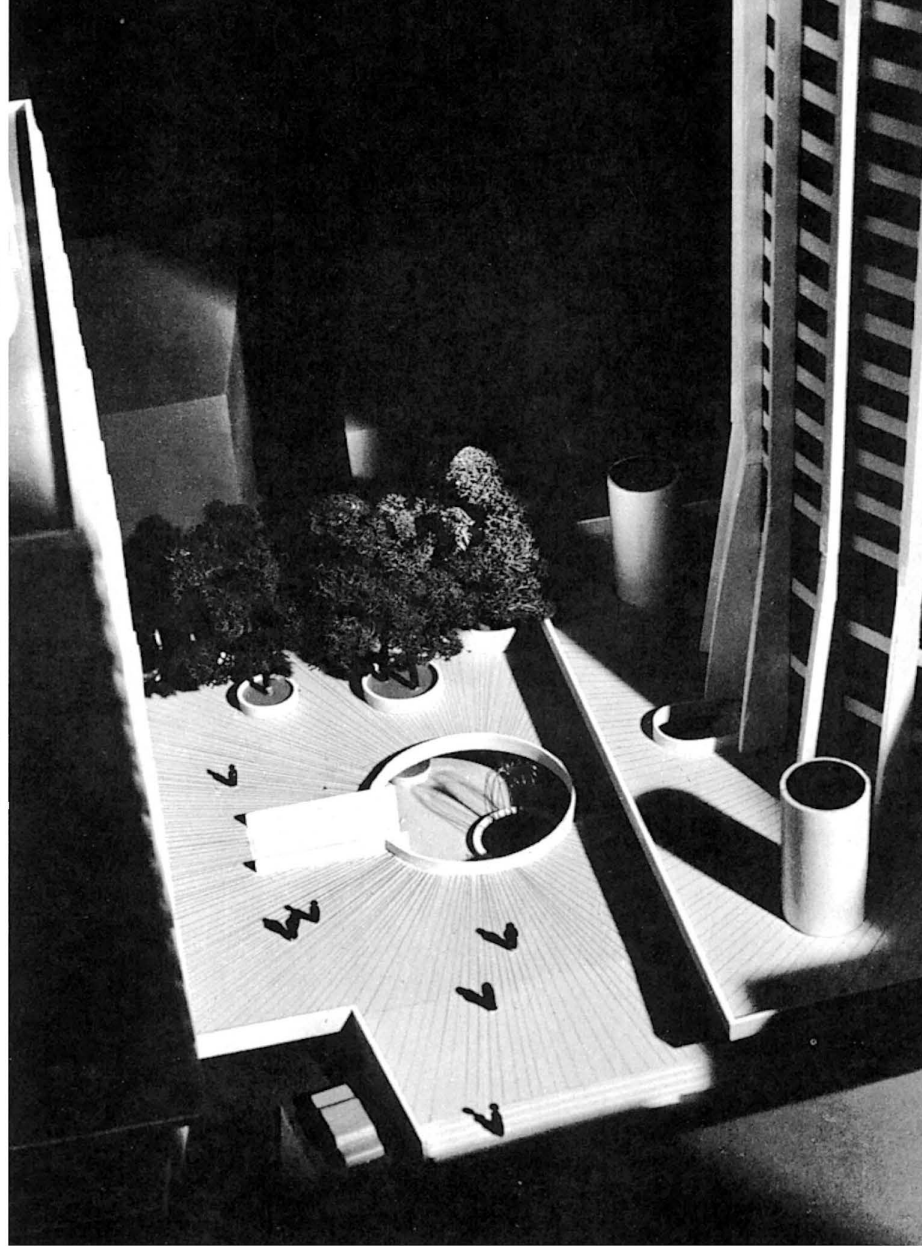
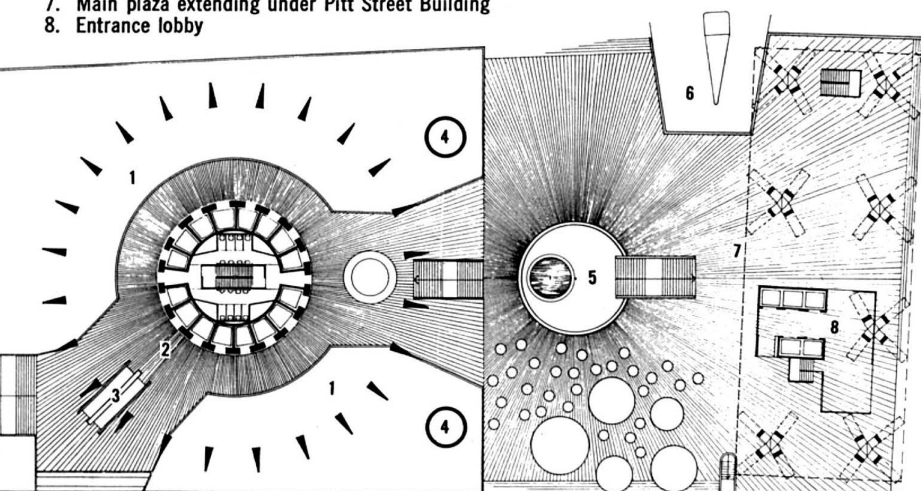
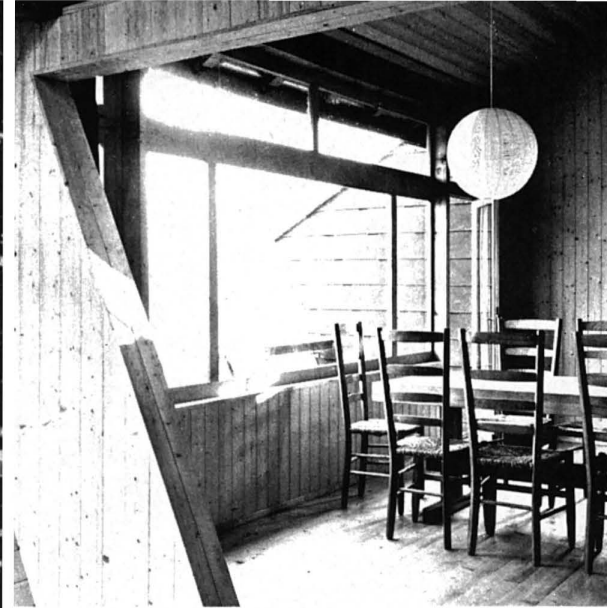






Photo by Erwin Liechti

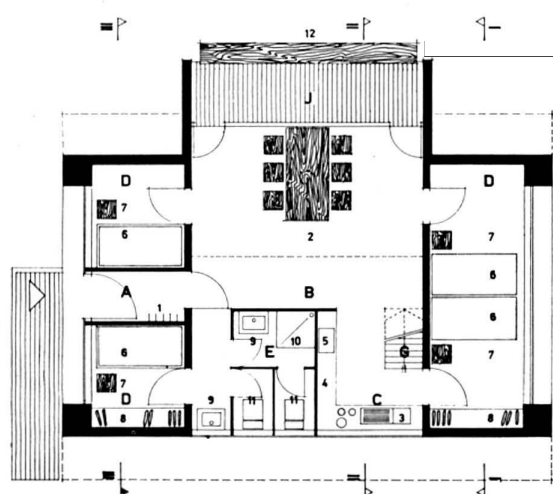


Interior photos by Freytag

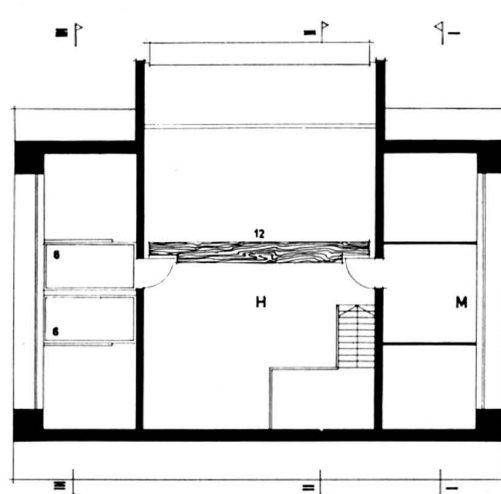


Photo by Erwin Kuenzi

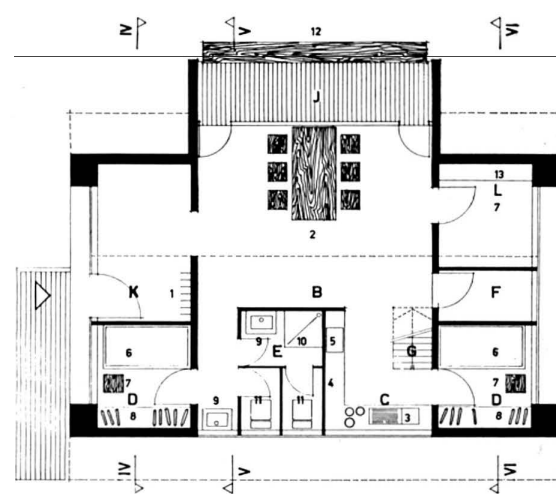
1st floor

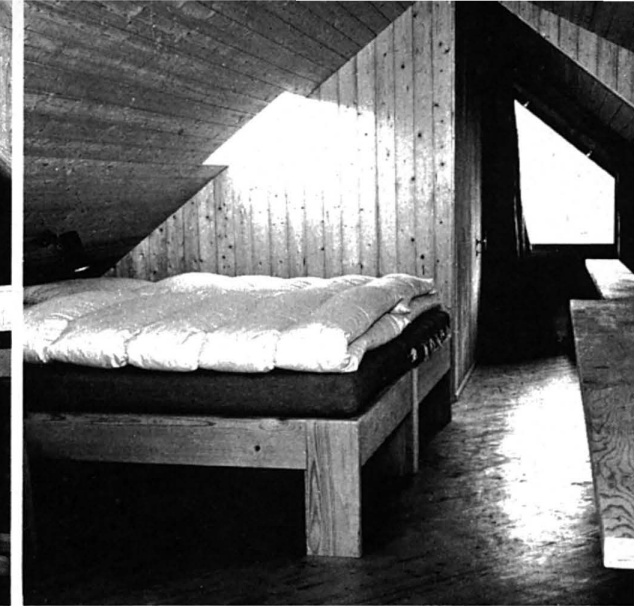
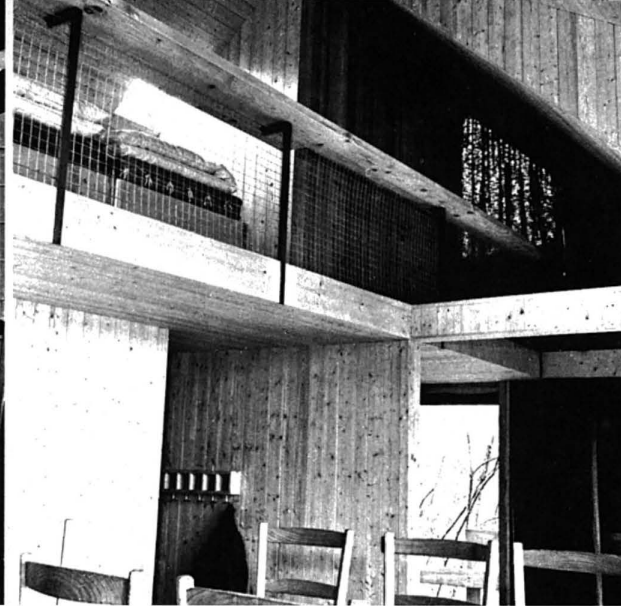


2nd floor



1st floor





## VACATION VILLAGE BY JUSTUS DAHINDEN, ARCHITECT

This vacation camp for families with many children is located in a scrub forest of chestnut trees in the Tresa Valley, Ticino, Switzerland. Design of the prefabricated chalets was worked out by a team of architects, contractors, educators, psychologists and economists. The chalets are of two types, accommodating six or 10 people, and the total capacity of the village is 200.

The houses are timber construction on four concrete pedestals with roofs and exterior walls of asbestos and interior wall finishes of woodfibre paneling. Units, manufactured at Interlaken, are sold furnished, complete with bedding, linen and kitchen utensils for about \$11,000 FOB. The price doesn't include foundation.

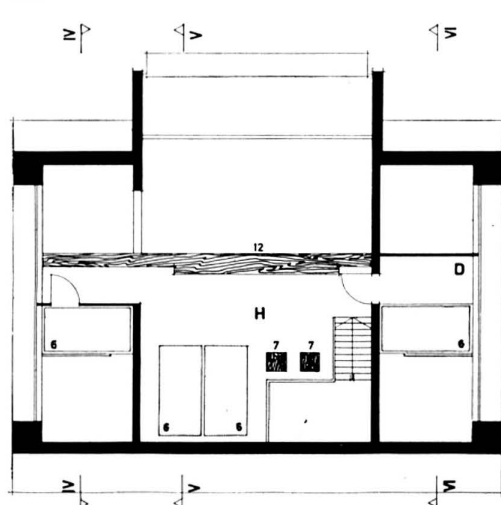


*Photo by Erika Faul Symmer*

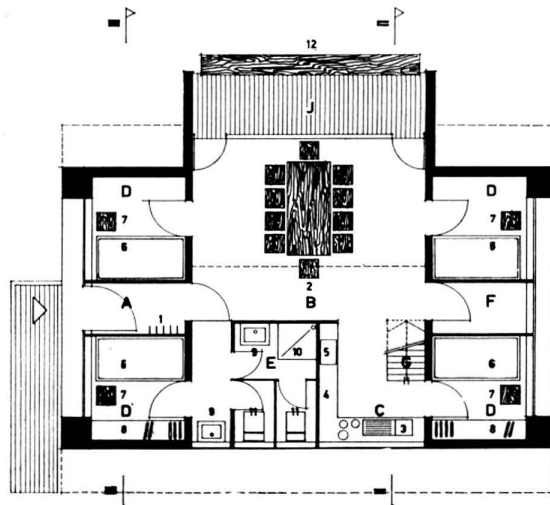


*Photo by Erwin Kuenzi*

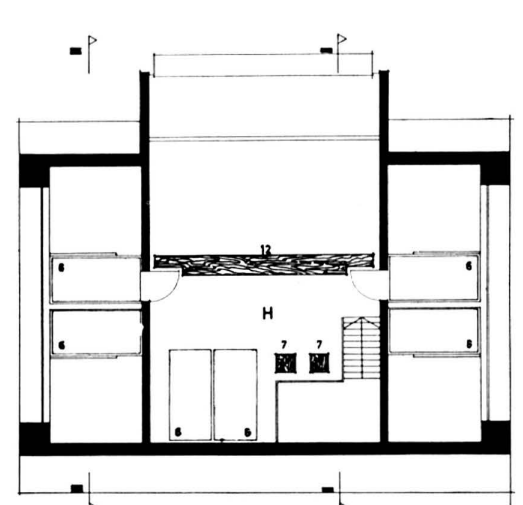
2nd floor



1st floor



2nd floor





# theater

BYRON PUMPHREY

In staging the Broadway version of Rolf Hochhuth's controversial drama, *The Deputy*, Gordon Davidson has given the professional theater group, University of California Extension, a production that ranks with the finest that producing unit has achieved in its six years of operation. To counteract the shortcomings of the Herman Shumlin-Jerome Rothenberg adaptation, Davidson had his actors read the complete translation of the play. The result is that, notwithstanding the truncated, superficial Broadway treatment of the work provided by Shumlin and Rothenberg, one glimpses the epic structure of the drama. What is of greater moment, Davidson's direction allows one to see that Hochhuth has written a profoundly moving Christian tragedy, a deeply religious play that burns with moral fervor without preaching. In short, Hochhuth has written a true drama, not a tract cast in dramatic form.

The play centers on the refusal of Pope Pius XII to use the enormous influence of his office to protest Hitler's slaughtering of the Jews. In his article, "The Director's Viewpoint," which appeared in the August issue of *FM & Fine Arts*, Davidson writes: "... from all I can tell about Pacelli (I'm reading a book on his life now) he was a man of God and a morally just and responsible person. And in fact, that's what I think is the question of the play. It's not why did the Pope remain silent, but why did *such a man* choose silence in the face of this particular thing. It's easy if you say he's an evil man or an evil person. But here was someone who was not only a man in a responsible position but was in truth a man of God." (my emphasis)

In the same issue of *FM & Fine Arts*, Father Martin Kenney of the Newman Center at UCLA defends Pius XII by asking, "Why didn't Roosevelt or Churchill speak? They denounced the Nazi political philosophy, but they didn't denounce the thing that Hochhuth is saying should have been denounced, the extermination of the Jewish people . . . *What is to be achieved by this play? How much can be gained from saying 'If Pius had spoken out, maybe . . .'*" (my emphasis)

The answer Hochhuth gives on the philosophical and moral issue of silence is the same as that given by Max Pribilla, a German Jesuit who suffered acute distress because his bishops failed to speak out about Hitler's Blood Purge of June 1934. "Silence has its limits," Pribilla wrote. "There are moments when, without tangible utility, something has to be said for no other reason but that it is true. If it is not said, the moral order of the world suffers a blow that is harder to overcome than its violation by brute force, and this principle is valid also for the silence to 'prevent the worst!' For ultimately the worst that could really happen is that truth and justice would no longer find spokesmen and martyrs on earth."

I came across this quotation in an article by Guenter Lewy in the April, 1965 issue of *Ramparts*, a national magazine published by lay Catholics with editorial offices in Menlo Park, California. Lewy closes his article by asking, "At a time when few in Nazi-ruled Europe could speak up for truth and justice, why was the spiritual head and supreme moral teacher of the Roman Catholic Church satisfied with the role of a comforter?"

Hochhuth—his fictional protagonist, the young Jesuit priest, Father Riccardo Fontana, and Riccardo's father, Count Fontana, the financial advisor to the Pope—all believed that Pius XII could have saved many Jewish lives by speaking out. But whether this would, or would not have happened, there was still the duty to speak, as one sees by Pribilla's profound formulation of the issue.

In reality, Hochhuth leaves one in no doubt as to why Pius XII refused to condemn Hitler. In common with most men exercising power on behalf of an institution, an organization, a nation, Pius XII thought less of humanity than of what he represented. As Hochhuth expressed it in his stage directions, "The actor who plays Pacelli should consider that His Holiness is much less a person than an institution." Hence that false conception of things on Pacelli's part which goes by the strange name of *Realpolitik*. To this way of thinking, the tragedy of the Jews, though it loomed large, was not supremely important. Pius

XII was rather a man of the cloth than a man of God, a man who felt his dignity and authority terribly affronted when Riccardo, the Christ figure in the play, insists on confronting him with the truth. This scene, *Il Gran Rifiuto*, was given virtually intact. One watches with tremendous fascination the Pope's struggle to reconcile what the Roman Catholic Church has proclaimed as his role, that of the deputy and representative of Christ, with what the Church, taken collectively, actually is, a center of political and economic power in the guise of spiritual leadership. It is Hochhuth's penetrating dramatic analysis of this disguise that has left the Catholic hierarchy aghast. The Pope occupies a singular position, one not to be equated with the position of other men in power and authority if one is to take this vicar of Christ dogma seriously. If one descends now to another level, that of the statesman or politician, one finds them also caught up in their respective roles, with national or party aims taking precedence over our common humanity. One may think of Harry Truman and Henry Stimson deciding to drop the atomic bomb on Hiroshima, of Adlai Stevenson defending his government's policy on Viet Nam, or of Churchill's vain refusal to give India her freedom. So while Hochhuth is perfectly right in declaring that Pius XII is a symbol not only for all leaders but for all men, it must not be forgotten that the Roman Catholic Church has arrogated to itself and its spiritual head a very special and unique position. When its supreme moral teacher deals with the world in the manner of a statesman or politician, the gap between what is proclaimed and actual behavior is bound to be noticed by anyone with the eyes to see.

In his discerning program note on the play, Davidson remarks: "Although the playwright makes a specific judgment, it is this production's hope that each member of the audience will perceive a larger intent—one of personal responsibility." This opens up another level for discussion, away from the leaders directly to ourselves. Suppose we formulate the issue in terms of the citizen and the man. The State would prefer that we be entirely citizens just as the Pope preferred that Riccardo be entirely a priest. Efficiency, conformity, and a blind adherence to the policy of the State are demanded of the citizen. But the man in us revolts against playing such a role, of sacrificing our conscience and individual judgments to those whom we have placed in authority. In recent months, Bertrand Russell went to jail in London for conducting a peace march, college professors conducted teach-ins about the national policy in Viet Nam, and Michael Hannon, a Los Angeles police officer, was suspended for participating in civil rights and foreign policy protest demonstrations. All of which would have delighted the heart of Henry David Thoreau, who, in his famous essay, "Resistance to Civil Government," an essay that nearly every high school graduate in my time was familiar with, wrote: "Can there not be a government in which majorities do not virtually decide right and wrong, but conscience? In which majorities decide only those questions to which the rule of expediency is applicable? Must the citizen ever for a moment, or in the last degree, resign his conscience to the legislator? Why has every man a conscience, then? I think we should be men first, and subjects afterwards."

It is because Hochhuth's play mirrors this conflict in men in whatever position they may occupy—this conflict of conscience and individual responsibility for one's conduct as against the behavior demanded by the State, the institution, the organization—that it is a drama that holds the utmost significance for our time.

The real deputy of Christ in this play is, of course, Riccardo, who, when he pins the yellow star of David on his cassock, chooses martyrdom. And it is this act, this lone act of defiance and identification with the persecuted Jews, that make of this play a Christian tragedy. Riccardo's act, true to the highest traditions of his church, is of the kind that is eventually rewarded with sainthood. Some day, one hopes, the church and society, will learn to recognize their saints while they are still alive.

Robert Brown gives an able performance as Riccardo and comes off particularly well in the climatic scene with the Pope. Philip Bourneuf as Pius XII conveys the institutional cast of character perfectly and Ronald Long as the worldly Cardinal who enjoys fashionable society is a stand-out. So, too, is Richard Carlyle in the sadly cut role of Kurt Gerstein.

More monstrous even than Hitler is the Doctor in the play, a char-

acter Hochhuth has drawn as the principle of evil incarnate. Cultured, handsome, suave, but believing absolutely in nothing, he uses Auschwitz as a laboratory for physical and psychological cruelty. He sums up all that is inhuman in humanity, and when he reflects on the history of the world, the truth of what he says is almost as shattering to the sensitive viewer as to Riccardo. Mark Richman gives an accomplished performance in the role of this malignantly polished doctor.

Notably good in supporting roles are Alan Napier as Count Fontana; Ian Wolfe as the Father General; Joseph Ruskin as The Apostolic Nuncio in Berlin and also as the Jewish Industrialist; William Winterson as the Gestapo Chief in Rome; and Philip Cary Jones as a Father in the Papal Legation.

Pia Gilbert's splendid sound score serves admirably to call up the nightmarish atmosphere of Nazi Germany and Peter Wexler's scenery, costumes, and lighting are eminently appropriate.

*The Deputy* is now scheduled to run through October 7, seats for its originally planned playing time of six weeks having been sold out prior to opening night. The success of such recent contemporary plays as *The Deputy*, *Luther*, *Becket*, and *A Man For All Seasons* suggest that people are looking to the drama for moral orientation. All of these deal with the contemporary crises in values and all have protagonists who elected to follow the path pointed out to them by their own conscience.

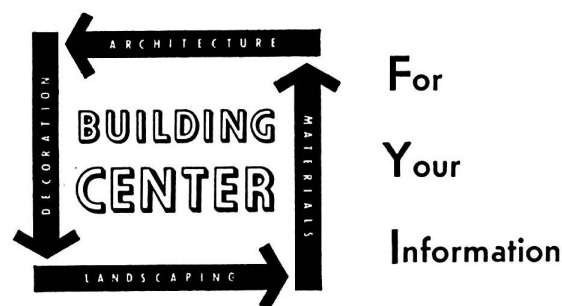
It is to be hoped that Davidson's talents as a director will be used frequently hereafter. This production shows that he is exceptionally gifted.

Although my comments ordinarily are confined to the professional theater, I must make another exception in the case of the Bluth Brothers production of *High Spirits*, the musical comedy based on Noel Coward's *Blithe Spirit*.

These two young men, both of whom are in their twenties, have a natural genius for theater that in the course of two years has won the recognition and respect of everyone who has followed their work. My own acquaintance with their staging of musicals was remote—the mere reading of reviews of their shows in the daily and trade press. When they secured the rights to do the West Coast premiere of *High Spirits*, I decided to have a look. What they have done with an amateur cast is astonishing. Tamara Fowler and Sylvia Reich would do credit to any professional troupe and the youthful chorus captivates with its verve and charm. The remainder of the cast is about what one would expect in a first-rate college show, but Fred Bluth's direction is so acute that he has developed a show that gets the best out of the actors and the script. It is all carried off with such aplomb and in such high spirits that though the cast, with the exceptions already noted, does not shine by virtue of its polish, there is no lack of that effervescent quality that is this musical's distinctive charm.

Miss Fowler plays the phantom wife whom Madame Arcati, while in a trance, summons from the astral plane, or wherever it is she came from. Miss Reich plays the medium. The musical direction is by Don Bluth and the choreography, another fine contribution, is by Ellen Davis. Don Bluth's four-man combo supplies the music. The Bluth Brothers Theater, apart, naturally, from MGM, is probably the best thing in Culver City. It is located in a converted supermarket at 10719 W. Jefferson Blvd. The transformation from supermarket to theater has been carried out with imagination and taste. It is an enjoyable place in which to see a good musical show. I guess you would call this a little musical theater since the Bluth Brothers confine themselves strictly to this genre. A professional cast for musicals in a small house is, of course, commercially out of the question. Given a big enough theater and professional actors, these fellows could go, places. Hugh Martin and Timothy Gray wrote the book and lyrics and composed the music for this delightful romp.

For a glimpse behind the "Bamboo Curtain" that contradicts a lot of the news we get on that country, I highly recommend the film, "China," photography and commentary by Felix Greene, with an assist in photography by Hsu Chih-Chiang. Greene's assignment for the British Broadcasting Company was to explore the everyday and cultural life of the Chinese people. Greene's documentary leaves no doubt that their life is immensely better than it ever was under the Western powers, under Chiang Kai-shek, and under the Japanese.



Q: The recent trend back to early California architecture has brought me several clients who want to build of adobe or some similar material that will have the stable, rustic and beautiful appearance of adobe. Can you add to the current information on this in my files?

A: Padre brick is something new in a structural brick that would seem to have been introduced especially for your clients. It has the color, size and texture of traditional Spanish adobe combined in a modern structural brick. Its warm, rich, earthen color comes from the Alberhill clays and its texture is purposely primitive, rough, sandy and irregular.

Q: Has anything been done in shower compartment design to eliminate some of the problems of cracks, leaks, etc.?

A: The prefabricated circle shower is the most revolutionary improvement that we have seen in some time. Its components are molded in giant multi-ton presses using a special formulation of crushed stone, polyester resin and reinforcing agents to yield a permanent, non-corrosive, homogeneous material. The units come in selected colors and can be enclosed with either a sliding door or curtain. In either case, no water drips on the floor outside the compartment. It is a space saving installation that actually offers more usable space to the bather in the shower itself because of its wall construction and its circular design. The unit is made by the same firm that introduced the shell shower requiring no door or curtain.

Q: Where there is to be a large expanse of glass in a wall with a southerly exposure, what is new in the field of heat and light control?

A: A solar control film is the newest. Developed as a product to be applied to windows in order to reduce the amount of radiant heat and glare from the sun, it also eliminates most of the sun's detrimental ultraviolet rays that cause color fading and finish cracking. Unlike conventional glare-reducing materials, it forms a shield which reflects the sun rays back through the glass rather than merely absorbing them. It is therefore effective in reducing transmission of heat, glare and ultraviolet rays while maintaining the transparency and visual properties of the glass. It has just been installed on the glass wall of the Building Center Club Room where you can see it in action and gauge its effectiveness.

Q: I would like to use scenic paper on one wall of a large room. I am faced with two problems. One is the unusual length of the room; the other is the fact that it is apt to get hard wear. Any suggestions?

A: It is now possible to get scenic designs that have been hand-printed on durable vinyl to give extra years of lasting beauty even on walls that will be exposed to hard wear. As to the problem of length, this scenic wallpaper is really a mural design which has been divided into vertical sections 27" wide. When these are hung in sequence they make the complete design. Sets vary in number of strips. They can be used on walls of any length by repeating sets or parts of sets, or by filling out remaining wall space with plain matching background paper available with all sets.



# music

PETER YATES

## THE PROOF OF THE NOTATION — PART 1

*Notation is a complex and entangled subject, impossible I believe at the present time to meet head on, whether one approach it in musico-logical or in textbook fashion. Like the blind men and the elephant, I have tried to show in this article what is involved. I shall be grateful to anyone who sends me criticism or comment.*

What is an ocean wave good for? It can only break on the beach. But much may happen while it is passing across the ocean surface. Most waves are similar, formed to a common pattern of place and time. Yes, but no two waves are the same, and the pattern changes constantly, influenced by time, tide, wind, a distant storm at sea, a seismic convulsion. A tidal wave, carrying its burden of potential destruction thousands of miles across the ocean surface, may be no more than a few feet high; such is the music of Erik Satie, of Anton Webern.

Is there esthetic worth in a destructive force? The art of tragedy affirms it. Nature and need do not value our categories of form and permanence. The oldest surviving creatures are not the powerful predators. Wind and water erode rock, shape cliff and desert; fire, storm, nature and human nature destroy habitation and cathedrals; evolution involves constant destruction and replacement, not the survival of the fittest by overt competition but continual adaptation of that which survives to changing circumstance. No music of another period is heard today in the style or sound in which it was conceived.

"... It is the field of force of a word that is decisive." (Ludwig Wittgenstein: *Philosophical Investigations*) Similarly, it is the field of force of a musical note that is decisive. What is a musical note?

Notation is the skill of expressing musical ideas in writing—or, as Busoni put it, "an ingenious expedient for catching an inspiration." Most notational systems are imperfect, like systems of spelling and

pronunciation. They may change decisively, bringing us unexpected and unprecedented knowledge and ability to think and say new things; this has happened during the past century to our long-established mathematical systems. A notational system implies a corresponding system of interpretation, according to a traditional usage which is at once acquired by habituation and learned by rote (repetition of forms or phrases—and the dictionary adds, "often without attention to meaning"). Challenging our established system of musical notation we direct fresh thought to its substance, its significance as a language of signs; and, as it has happened in mathematics, we discover unexpected and unprecedented knowledge and the ability to think and say new things.

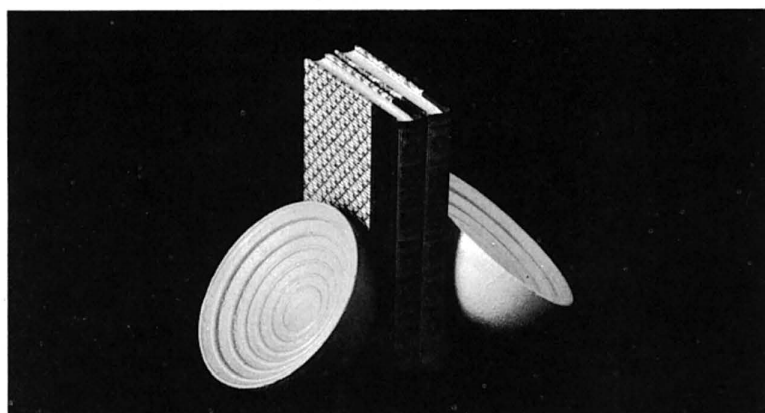
In the eighteenth century, musicianship was the ability to read notes, not simply as written but often by embellishing them with ornaments, by the addition of other notes, and by alteration of the notated rhythm, according to principles of learning and good taste: musicianship focussed on the skill of the performer. During the nineteenth century, with the establishing of large orchestras, musicianship was divided between two contrary skills: the ability of any group of orchestral musicians to play the same written notes almost exactly alike under the direction of a conductor; and the ability of the conductor or a solo player to interpret the notation in his own way, which resulted in excesses of applied demonstrative rhetoric. The conflict has not ended. Conductors still mime a ritualistic interpretation between orchestra and public—they are admired either because they do this or because they do not—to which the players give no notice, watching only for the downbeat. Soloists prove their expertise by note-perfect, mechanically expert renderings, which by their impersonal efficiency cease to be musical. "The young pianists all play exceedingly well," Virgil Thomson said to me, "and they are all equally uninteresting."

By the early twentieth century, Arnold Schoenberg could write to a singer: "I am anxious to explain to you why I cannot allow any will but mine to prevail in realizing the musical thoughts that I have recorded on paper, and why realizing them must be done in such deadly earnest, with such inexorable severity, because the composing was done just that way. I should very much like to do some thorough rehearsing with you, so that you should get to know the way to solve the musical picture-puzzles that my works constitute . . ."

Can a "musical picture-puzzle" be "in deadly earnest"? The answer is, yes, of course—with some allowance for Schoenberg's humor. Stravinsky, at a later time, would be complaining that conductors fail to study his phonograph records to learn how they should prepare his compositions for performance.

Schoenberg wrote that the effect of a musical composition changes with each hearing, therefore one must study it in score. Today, a composer can write out his exact instructions on a worksheet in the language read by a computer, have these instructions fed on punch-cards into the electronic machine, which does none of his composing for him but works out his instructions in the linear sequence he has indicated; converter and sound-generator translate the instructions into a succession of electrical impulses on an electronic tape, which are in turn translated into audible vibrations (music) when played anywhere by means of tape-player, amplifier, and loudspeaker to an audience of any size. Where is the score? It is not the composer's worksheet; any musical "secrets" hidden there which are not audible on the recorded tape as the composer desired them reveal technological failure but no fresh understanding of the music. The musical thoughts have been realized "with inexorable severity," and the puzzles have been solved in the making of them, "because the composing was done just that way." The composer has decided the interpretation while composing it. Schoenberg was aware of this possibility, which he did not live to see realized.

Schoenberg repeatedly refused to participate in a performance of his music, unless ample time for rehearsals had been positively guaranteed. Writing to Edgard Varese in 1922 he was holding up the example of "something like 100 rehearsals" for *Pierrot Lunaire* in Vienna, "with everyone shivering and starving." About twenty years after this, when I brought a group of Los Angeles musicians to Schoenberg's home to discuss performing *Pierrot Lunaire* under his direction at Stanford University, he was still asking between sixty and a hundred rehearsals;



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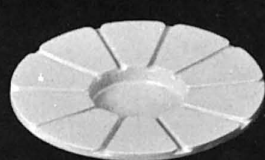
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the musicians gave up the project. At a later time, for a program of Schoenberg's music in honor of his seventieth birthday, we prepared the same work with no more than the usual number of rehearsals expected in this country; when Schoenberg heard a broadcast of the performance, directed by Ingolf Dahl, he praised it.

In today's economic conditions it is probably not possible anywhere in the world to afford rehearsal time for a performance on Schoenberg's terms. Preparation of the first performance of Ives' Fourth Symphony, a superlatively demanding, very large score, though less than a half-hour in playing time, needed eleven rehearsals—and a grant of money from the Rockefeller Foundation to pay for part of them.

Today, musicians who would play any but routinized music must learn to read difficult compositions accurately at sight and work them out for performance with a minimum of rehearsal. The proliferation of chamber compositions for groups of solo instrumentalists encourages individual musicians to make this effort and reflects their willingness to do so. One of the most admired, and the prime model of such compositions, is *Pierrot Lunaire*.

Music, therefore, consists of: 1. notation; 2. the entire ensemble of notes, plus expressive indications, the score; 3. a more or less exact translation of the notation into sounds; and 4. what the listener hears. Each of these, however anyone may insist otherwise, is a variable. Notation may be by other means than musical notes; a score may not exist. Even a performance by electronic means will vary with the equipment and acoustics.

The odd fact is that while most composers and lovers of music at the present time continue to believe that a notated composition should be performed exactly to the composer's notation and instructions, they question the musical worth of an electronic composition which dispenses with a live performer's *interpretation*. Is the beauty of a musical performance to be scored negatively, like that of a diving or gymnastic contest, according to the performer's errors?

Composers have written puzzle-canon in musical notation without consideration of the sound as music, because they did not intend that the canons should be performed. Schoenberg wrote a number of these; some are in performance "interesting" and some very beautiful. Notation as an art can exist without sound, as handwriting can be an art separate from its message, or a graphic musical score may be exhibited as a visual work of art. Music as an art exists to be realized in sound.

Silence can be musical. Silence plus one note can be musical, but one note is not music. The most primitive music consists of at least two sounds in rhythmic relationship. Notation thus implies rhythm, and rhythm depends on dynamics (relative volume and timbre), which notation can but approximately indicate. A new notation to provide for these is possible. In a score for computer the composer must control each of these variables by writing out exact instructions. The machine will not think for him like a musician; it will do only what he tells it to do. Is it desirable that an orchestra or a soloist should reproduce a score with a computer's exactness?

A note is, by contemporary agreement, the sign for a particular sound. With the continual rising of musical pitch during the nineteenth and twentieth centuries, a note written by Mozart will be played and heard today at a pitch perhaps a half-step higher than Mozart intended: in Mozart's ears it would be another note, the wrong one. The disparity is enough to intensify the sound of the note when played by a string instrument or sung, because the string will be more taut and the voice strain to rise higher, and the sonority will be correspondingly lessened. We give no thought to such disparity, which would assuredly have brought sharp protest from Mozart.

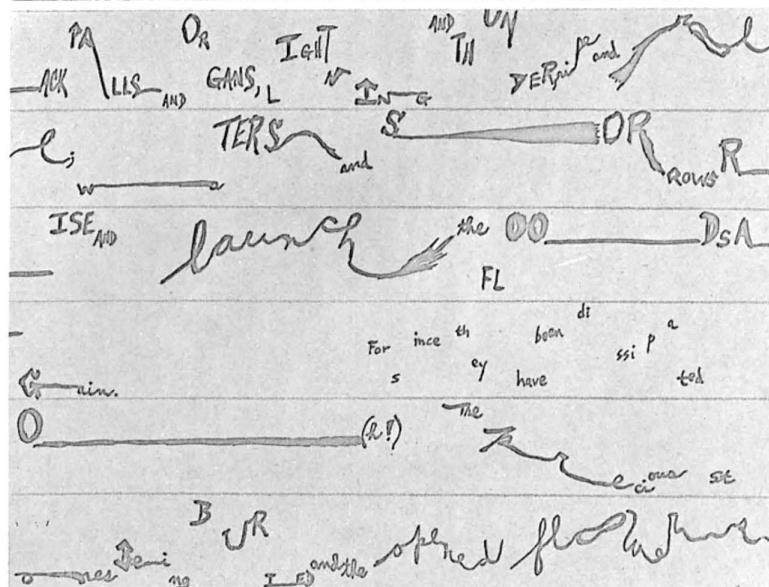
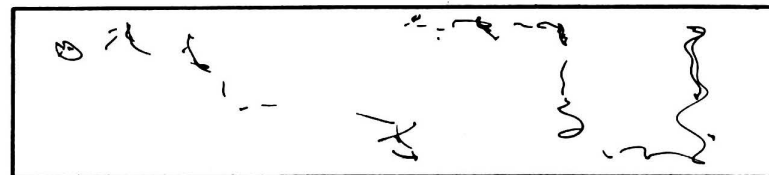
We perform today in equal temperament music meant to be heard with different pitch relationships in just intonation, or meantone or well tempered tuning, and give no thought to the distinct changes in intervallic relationships and consequently in harmony which result. It is as if we played these compositions on a mistuned instrument. An eighteenth century musician hearing such performance would be convinced that we think music only in terms of notation regardless of its sound. (We may soon be able to record and perform Bach fugues and Beethoven sonatas by computer, adjusting the intervals to acoustically correct relationships not obtainable with a 12-note keyboard.

Would Bach and Beethoven prefer this?) Even when playing older music on the correct archaic instruments, as many now do, we tune these instruments to our higher concert pitch and equal temperament, so that the instruments no longer sound with their natural voices. The vocal tessitura of Beethoven's *Ode to Joy* is as high as Beethoven could risk; we force it still higher. Because we pay no attention to the rhythmic conventions of his period, the eighteenth century musician would be doubly convinced that we think music only in terms of its exact notation, with no sense of the correct rhythm. (The same thing is already happening in our "musicological jazz.") We accept as consonances or permissible dissonances such discords as the eighteenth century musician took care to avoid, calling them "the Wolf." Indeed, many composers seem to have lost understanding of the difference between dissonance and discord. Our extreme inconsistency of intonation leaves many notes and intervals in doubt. A great composer and a great instrumentalist have each complained to me: "Our best orchestras today sound like mud." For an ear sharpened by the microtonal distinctions of electronic and noise music the confused spread of intonation in ordinary orchestral playing can be distressing.

A note is, consequently, at the present time, the sign for an arbitrary pitch, generally agreed to be correct when produced by a well-tuned piano (unless originally for harpsichord, in which case a majority of the overtones will have been lost), less accurate when produced by a string instrument, and no more than approximate when produced by the thick, heavily wound lower bass strings of a piano, or a string bass or a tuba. A note differs also according to the timbre or overtone-pattern, attack, decay, etc. (the sound envelope) of the instrument which sounds it.

Correct pitch or intonation is not the ultimate consideration. To play a melody as they believe it should be heard, musicians deviate above or below the correct pitches, if the instrument permits, with the result that voice or violin often do not sound the same pitches as an accompanying piano; the player alters the exact fall of the notes to shape a melodic rhythm by degrees which our notation cannot indicate. The rhythm of a melodic passage played on harpsichord will need to be articulated by a more decided differentiation in the time-span of intervals notated as alike than when the same melodic passage is played on a piano, because the harpsichord cannot provide the dynamic shaping of piano tone. That is why the altered rhythm of eighteenth century harpsichord music changed to the dynamically shaped rhythm of nineteenth century piano music, revising completely the fundamentals of musical interpretation.

Earle Brown: Flute cadenza from "Hodograph 1." Associated Music Publishers.



Malcolm Goldstein "Illuminations" (from *Fantastic Gardens* by Rimbaud) for vocal ensemble.



Stravinsky wrote the keyboard obligato of his opera, *The Rake's Progress*, to be played on a harpsichord, because of his pleasure in the sound of that instrument, but in piano style. He told me that he had at last solved the problem of balance by doubling the keyboard parts at the octave—thus creating in effect an instrumental quality which belongs neither to harpsichord nor to piano. Several composers, among them Frank Martin and Elliott Carter, have written concerto-type compositions for contrasting solo harpsichord and solo piano, after the example of C. P. E. Bach's concertos for the two instruments. Bach's harpsichord and piano sounded very nearly in the same volume and register, focussing the real stylistic differences between the two instruments, which shape and color every phrase. In the works by Martin and Carter the disparity in volume and register between a large modern harpsichord and a large modern piano are very great, but the stylistic distinction has been lost; the contrasting sound of the two instruments, however well managed, is too often obscured—certainly in a large concert hall—by the lack of balance. Amplifying a harpsichord by electronic means to increase the volume distorts the register. We are so accustomed to amplifying records of harpsichord music beyond the normal sounding of the instrument that many do not recognize the distinction, but a good harpsichordist knows it: a strident brilliance replaces the natural color of the intonation. The question arises: does the modern composer of an ensemble work including harpsichord intend that the harpsichord tone should be amplified, and that the consequent brilliance, unnatural to the instrument but not to our contemporary hearing, should be its *correct* intonation for his composition?

In the music of Webern, and much of Stravinsky, the field of force of a single note in relation to the other notes around it may be decisive. In Schoenberg's music, and in Alban Berg's, a note is usually decisive not for itself alone but because of its place within a larger melodic pattern of intervals; the field, as in J. S. Bach's music, is that of the entire melody, the melodic consistency remaining constant, within a unified texture of continual melodic—not analytic—variation. (Com-

pare Webern's little pieces for violin and for cello with piano and Berg's pieces for clarinet and piano or Schoenberg's piano pieces, opus 19.) With Bartok, the field of force of the single note diminishes as the melody enlarges, but Bartok will often contrast this melodic tonal expansion against a single tone constantly reiterated; analytic variation of the melody by the addition of new notes and percussive sounds embroiders the contrast. In Messiaen's music a group of notes does the work of a note, the field of force of the single note being so much the less decisive. In several of Henry Cowell's youthful compositions and some of Bartok's middle period, as well as in earlier instances by Ives, a *tone-cluster* (an extra-harmonic clump of notes sounded by fingers, fists, or elbows, or in the *Hawthorne* movement of the Ives *Concord Sonata*, by a 14-inch rule) may do the work of a note; the harmonic field of force will be lessened, the dynamic force but not the fineness of discrimination will be increased.

John Cage demonstrated with his compositions for *prepared piano* (screws, bolts, nuts, rubber strips, or other objects placed at measured points between the strings sounded by some keys of a piano, altering the pitch and timbre), that a note (as written) may be read as instruction to strike a certain key of the piano keyboard, the sign having no other relation to the quite unexpected tone (pitch and type of sound) the instrument may produce, transforming the piano into a percussive instrument of microtonal variability. Lou Harrison adapted the so-called *tack-piano*, having thumbtacks in the hammers, used sometimes as a homemade substitute for a harpsichord, to furnish a new quality of pitched percussive tone which he has used with notable effectiveness in several compositions.

A note intended to be played by a percussive sound-producer of indefinite pitch may have a distinct timbre like a snare drum, or an indeterminate clangor like a cowbell, a thump or thud like a bass drum, or a knock. The snare drum functions as a solo instrument in Ives' *Putnam's Camp* for orchestra and Lou Harrison's *Song of Quez-tecoatl* for percussion group.

Stravinsky employed such a battery of indeterminate sound-producers with the four pianos in *The Wedding*; the rich spread of imprecisely focussed pitches accentuates the pitched polytonal motor of the pianos, creating by simple means a consistency of sound atmosphere which colors the dramatic variety of vocal styles. The great tapestries of abstract instrumental and percussive sound which Edgard Varese created during the same period divorced still further the expected sound from the notated sign. Cowell, Milhaud, Carlos Chavez, Gerald Strang, Bartok, and other composers explored in various ways the tonal freedom of such percussive media, with and without instruments of determinate pitch. In the later 1930s, John Cage, with Lou Harrison and William Russell, created a new extra-tonal percussion medium and a percussion literature, strongly influenced at the start by the Indonesian *gamelan* orchestra which had already colored the music of Debussy and Ravel and by the melodic-rhythmic proportions (*raga* and *tala*) of Indian music. Harrison composed a large number of percussion compositions in an increasingly melodic and polyphonic style, the intervals relative to the arbitrary pitches and timbres of the sound-producers. Among these are a concerto for violin and a wide range of percussion including flowerpots, one pound coffee cans, and metal bucket, and *Concerto in Slendro* (a five-note scale) for violin with two tack-pianos, celesta, tympani, and two garbage pails. The seemingly arbitrary and unmusical sound-producing objects become, in these settings, distinctly musical, each unusual timbre exerting a distinguishable field of force. Groups playing the percussion literature now exist in several universities and cities; musical faculty are hired to teach and direct it; and composers are steadily adding new compositions.

After these developments, it is only going a step farther to substitute for the 12-note scale any microtonal scale or pattern of intervals, or any note or tone-cluster selected by chance (as in Cage's *Music of Changes* for piano), or indeed any sound or noise, however indeterminately arrived at or produced, for an instrumental tone.

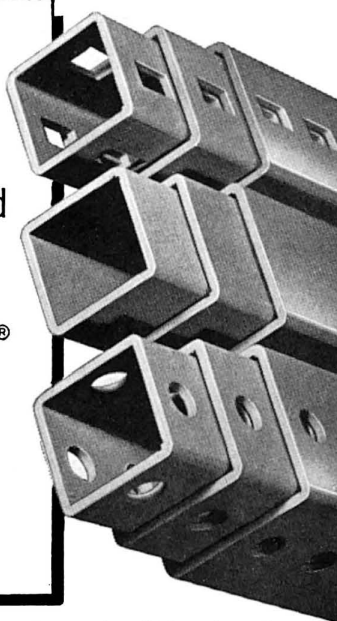
The consequences of these logical decisions, resulting from no arbitrary waywardness but inherent in the current evolution of music, as I have tried to demonstrate, are rapidly changing our conception of music as an art, while increasing our skill to use sound musically and our knowledge of its creative potentialities.

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# books

CREATIVE PHOTOGRAPHY by Aaron Scharf (Reinhold, \$2.25)

A history of photography as an art form, rather than a "how to" book. The author, an English art historian, seems to equate creativity with the unorthodox; resulting in the inclusion of mixed media works by, among others, Ernst and Rauschenberg, while photographers such as Cartier-Bresson and Steichen are omitted. Andreas Feininger is represented by two full page illustrations, from solarized transparencies; considering the numerous creative techniques Feininger has employed, the author could have exercised greater creativity in selection of prints. The book's usefulness as a reference work is great plants bear more than artificial flowers.

—JOHANNA PICK

THE SPANISH REPUBLIC AND THE CIVIL WAR: 1931-1939 by Gabriel Jackson (Princeton University Press, \$12.50)

The Spanish Civil War has often been called the Prelude to World War II, and many volumes have been written on this international curtain-raiser to the holocaust to come. Prof. Jackson has approached the Spanish War as a fact of Spanish history, avoiding its international implications in order to emphasize the national character of the upheaval. He begins with an analysis of the Republic and its shortcomings and weaknesses, then a study of the inner conflicts of Spanish economy and politics, rivalries for power among various ambitious groups and leaders. A definitive work on the subject.

THE ANGUISH OF INDIA by Ronald Segal (Stein & Day, \$6.50)

This is a scathing indictment of Indian self-government: teeming starving millions; the new Rajs affecting British splendor and hauteur with none of the English capacity for ruling; the unresolved problems of producing enough food and capital goods to feed and clothe its own people. This is a bitter book, for the author has little patience with the Indian mystique which thinks in terms of Nirvana, the Asian equivalent to "manana," and eschews direct thinking, direct action and direct responsibility. He believes that the eventual absorption of India by Red China is inevitable, and that the root of it all is traditional Indian passivity. Segal, an African and not warmly pro-Western, is perhaps the right man to undertake this evaluation of a subcontinent, of a sixth of the world's population which does not know how to feed itself, clothe itself, or step into the twentieth century. Segal takes cognizance of the endless problems which India faces in its economy, its social life, its fight against the awesome burdens of the caste system, its fight against superstition, illiteracy and incompetence at levels where little ought to exist. This is a pessimist's report; yet one that a competent reporter must make. The burden of India, however, is not India's alone but is ultimately mankind's, a fact which seems to have escaped the author.

—ROBERT JOSEPH

## POETRY

Poets, poets, and where is the audience? Painting is an investment which you can hang on the wall while its value appreciates; but music you can only listen to and poetry you must learn to read by yourself, having the scores and books around to look at doesn't increase their value. The number of practising poets in the United States exceeds estimation. And for that reason it is difficult to know which are the skilled ones—by whose estimate, by whose standards?

In San Francisco, James Schevill directs The Poetry Center, one of the network of outposts, nearly all in the universities, where live poets continue reading new poetry to a living public. Looked at another way, one can say that these are outposts in unconquered country: the poet is not retreating into a cultural blockhouse against society; among artists the poet is now the farthest out frontiersman hunting alone in the Bad Lands bordering on annihilation.

I have two of Schevill's books, *The Stalingrad Elegies* and *Private Dooms and Public Destinations, Poems 1945-1962*, both published by Alan Swallow. The *Elegies* first appeared in the magazine *Contact*.

"It was not just the uniquely disastrous Battle of Stalingrad, but the modern Inferno which man has created with our new weapons of destruction that was the first impulse of this poem," Schevill writes in his Postscript. The letters are adapted from a book, *Last Letters from Stalingrad*; they were the last letters to be flown out from the trapped soldiers to their families, impounded, censored, address and sender's name removed, suppressed to preserve military morale, and at length rescued from the German army archives. Some of the letters are reprinted as written, more are translated as poems. W. B. Yeats would have objected to them, as he objected to the war poems by Wilfrid Owen: the emotion is built into the situation, the poetry can only say again what has been strongly felt before the poem existed. Yet I am not sure that the catharsis of tragic circumstances in his choral drama of individual voices can be so objectively dismissed. The poet has kept his own voice out of it; the situations are real; there is no false sentiment.

Most of Schevill's collected poems are journalistic, objective comments, not criticism but "this is the way it was." *A Story of Soutine* ends:

Blue and blubbing in the  
Brook, the sodden peasant woman howled hysterically,  
And from the rain-wet, singing surge of its colors,  
The painting stared at her mortal behavior, reflecting  
The arrogant mirror of art.

Journalism may be the art of the present day, the poet instead of withdrawing himself into his Persona going out to record what is happening, what he reads, putting first not his thought but the material thought labors to assimilate: therefore Schevill's title, *Private Lives and Public Destinations*. As traditional readers of traditional poetry we expect the poet to present himself in his lyric. Here as in much poetry today one finds no poet and no lyric, stone instead of bread, a medium not to be digested by appreciation but for the intelligence to handle. What do we do with it?

At North Texas State University, as elsewhere during my travels, I asked whether there was a local poet I should meet. They told me, there's Gene Shuford, Professor of Journalism; he has won twenty of the annual prizes offered by the Texas Society and a fellowship award of the Poetry Society of America. He phoned, and we had lunch together, then sat down in my motel room and started reading. From those credentials I expected nothing; he didn't urge them on me or his poems.

All day we drive across the gaunted land,  
tasting the dirt, watching the hungry wind  
grind the earth . . .

(Continued on Next Page)

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but I heard the wind grind and recognized the poet who puts one word after another and often the right word. How many poets must there be to make one great one? Are we looking just now for great ones? Would we know him? I don't recognize many of the contemporary great ones we profess; they seem to me professional poets writing for editors and critics, as Robert Frost became in his later years. There's a quality of Frost in Gene Shuford, the hearing of the words; but you couldn't come at this by imitation.

He wished he could not hear the wind that night  
He stopped his ears and, waiting for the light,  
Could not shut away the wind's grief . . .  
Farmers, he knew, enjoy the sound of harvest,  
But a poet feels the pain of fruit falling  
Keenly as the wind, or as the last bird, calling.  
No farmer, he turned in the dark and lay there, sighing.

Paul Blackburn in New York has translated the Provençal poets into an American idiom more grateful than Pound's laborious writhings. He and his wife, Sarah, brought together several poets for me one evening at their apartment. Paul lectured me about skill and violence in picketing, then handed me his Provençal collection hoping I could read some of it while the collected poets carried on their din of private gossip. The barrier was absolute between me and them; poets are more difficult to become acquainted with than composers, singly or in a group they feel more keenly their isolation from the habitual world, which has no place for them in its thought, and they do not have the composer's hard-earned experience in working with strangers to bring a composition to performance. The European poet has a place in society, the American poet does not; for this reason I speak of the American poetic underground.

I do not have any of Paul Blackburn's Provençal translations, one volume published several years ago, the other awaiting publication. He gave me what is scarcely more than a pamphlet, *Brooklyn-Manhattan Transit, a bouquet for Flatbush*, consisting of five poems.

I had started reading when I got on  
and somewhere down past newkirk reached  
number 29 and read aloud  
The crowd  
in the train  
looked startled at first but settled down  
to enjoy the bit  
even if they did think I  
was insane or something . . .

The Provençal poet played self-conscious drama, too, within a similar convention: an urban court of love in surroundings as coarse and precarious.

—Sarah! Saaraah! Hoo-hoo! . . . Saaarah! . . . Hooo-hoo!  
les gens sont jaloux  
ils nous prendraient notre mort  
notre mort à nous . . .

The technique is different.

Gene Frumkin's *The Hawk and the Lizard* (Alan Swallow) is made up, he tells me, of old poems. I like better a couple of recent things in *Poetry*. He was one of our Poetry Los Angeles group. He makes no pretensions about his poetry and keeps working at it. Much of the present-day poetry is domestic, wry, with the smell of the house, often like a quarrel in public, yet devoted. You see the new generation rising through the public schools, aware of the long struggle behind them.

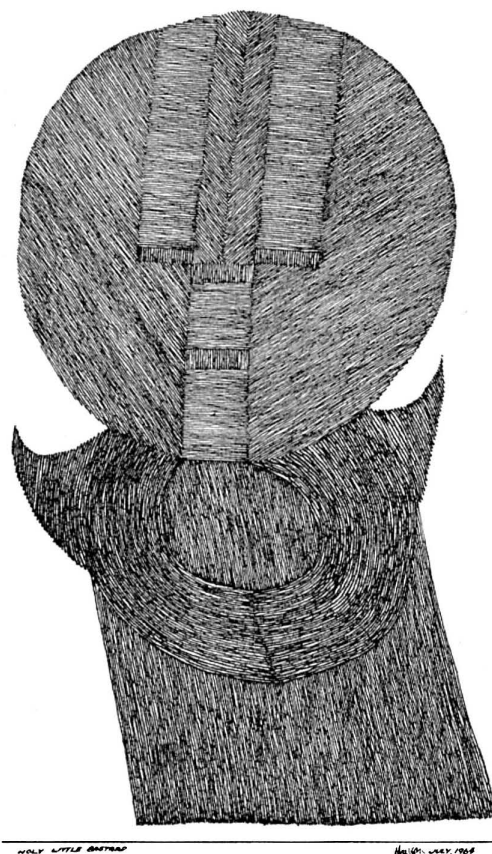
Here, soon asleep in my arms, is the dream  
you carried in shacks and tenements,  
on relief, through nights when love was dark  
in windows though the moon burned high:  
your sickbed son raises a new health.

The new health is, from another poem:

that clear, intuitive self  
that is all I need ever completely own.

Is it a wonder that these sons and grandsons, daughters and granddaughters, are demanding of society and of the universities that these greatly impaired by its lack of an index.

—PETER YATES



There will be an exhibition of paintings, drawings and prints by Hardy Hanson at the Rex Evans Gallery, Los Angeles, from November 15 through December 4. Mr. Hanson, who has done a number of covers for *Arts & Architecture*, teaches design at the USC School of Architecture and Fine Arts. The Evans Gallery is located at 748½ La Cienega Blvd.

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ence table, executive chairs, and side chairs. The center spread features a full-color photograph showing the various Hiebert furniture pieces. Copies of the catalog may be obtained free of charge. Hiebert, Inc.

(115) The 36-page Hotpoint Profit Builders catalog for architects and builders contains specifics on Hotpoint's full line of products, including built-in ovens, dishwashers, disposers, heating devices, refrigerators, ranges, air conditioners, laundry equipment. Also included are diagrams of twelve model Hotpoint kitchens with complete specifications for each. Hotpoint.

(116) Executive desk accessories and home furnishings in an original design series of black matte cast iron and other metals. Fine castings made exclusively in this country. Ashtrays, cigarette boxes, lighters, candelabums, other decorative pieces. Catalogue available. Les Hunter Designs.

(117) Tile — Full-color brochure gives specifications and descriptive information about economy line of tile which offers all the advantages of genuine ceramic tile at a low price. Striking installations are illustrated to show why Trend Tile

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is ideal for budget-priced homes and multiple dwelling units. A complete color palette shows the 11 plain colors and 9 Crystal Glaze colors available. Also shown are the three versatile Trend Tile decoratives which enable architects, builders, tile contractors and designers to achieve a custom effect at a nominal price. Interpace.

(118) Tile — Full-color brochure, gives complete information about Franciscan Hermosa Tile, a Gladding, McBean building product, which features a host of interior and exterior installation photos which illustrate the wide range of colors, shapes and designs available in Franciscan Hermosa Tile. Interpace.

(119) Furniture — Three recently introduced Mies van der Rohe pieces plus complete line of furniture designed by Florence Knoll, Harry Bertola, Eero Saarinen, Richard Shultz, Mies van der Rohe and Lew Butler and a wide range of upholstery and drapery fabrics of infinite variety with color, weave and design utilizing both natural and man-made materials. Available to the architect is the Knoll planning unit to function as a design consultant. Knoll Associates, Inc.

(120) Four-page color brochure shows Facebrick residential, office and institutional installations. Contains Facebrick color-selection chart and Name-Texture-Size-Color specification information. Cost guide table compares ultimate wall costs of Facebrick with other materials. Free from Pacific Clay Products, Los Angeles Brick Division.

(121) Lighting: A completely new 12-page, 3-color brochure of popular items in their line of recessed and wall mounted residential lighting fixtures is now available from Marco. The literature includes typical installation photos as well as complete specifications on all items. Marvin Electric Manufacturing Company.

(122) Clocks — Complete information on the entire Howard Miller Clock Company timepiece line in illustrated brochures. Contemporary wall and table clocks by George Nelson; contemporary, "three-dimensional" electric wall clocks, including remote control outdoor

clocks and the new battery operated built-ins; Meridian Clocks in ceramic, wood, metal and other unusual finishes for decorative accents; Barwick Clocks in traditional designs, battery or A.C. movements. Howard Miller Clock Company.

(123) Lighting — Four-page illustrated brochure shows all 21 styles in four models — ceiling, wall, table and floor — designed by George Nelson for Howard Miller Clock Company. Included are the large fluorescent wall or ceiling units designed for contract installation. Dimensions and prices given. Howard Miller Clock Company.

(124) Selections from the diversified decorative accessory collections for the Howard Miller Clock Company. Brochure includes shelves, mirrors, spice cabinets, wall vanities and desks, planters, room dividers, Ribbonwal. Howard Miller Clock Company.

(125) Veneers — An eight-page publication discussing new, lightweight, pre-surfaced wall panels and column covers is now available from Mosaic Building Products, Inc. Provides information on Mosaic's panel wall, veneering panels, curtain wall panels, column covers and fire-rated panel walls. Architectural detail drawings as well as types of available surface materials are included. Numerous photographs illustrate handling and installation ease. A short-form guide specifications outline is provided. Mosaic Bldg. Products, Inc.

(126) A complete line of tile including Space-Rite and Perma-Glaze ceramic tile and the Designer Series and Signature Series decorative tile designed by outstanding artists in

a wide selection of colors. Also available in Summitville quarry tile. Pomona Tile Company.

(127) A complete acoustical consultation service for architects is now available from the Broadcast & Communications Products Division of Radio Corporation of America. Service includes analysis, tests and recommendations on acoustics for theaters, studios, auditoriums, stadiums, classrooms, or any other public or private building where mechanical sound devices are employed. Radio Corporation of America.

(128) Fredrick Ramond, Inc. has just printed its newest full color brochure introducing a startling breakthrough in lighting fixtures. Hand-blown, geometrically designed globes. This brochure spectacularly illustrates the indoor/outdoor application of this revolutionary lighting development. Fredrick Ramond, Inc.

(129) Fountains — A 70-page catalog - brochure is available from Roman Fountains, Inc. More than one hundred fountain ideas are illustrated. Physical characteristics, applications, plans and complete specifications are shown. Fountain planning and engineering made graphically clear. Roman Fountains, Inc.

(130) Scalamandré Fabrics. New Architects' Collection of contemporary textured upholsteries — natural fibres, man-made fibres and blends. Tremendous color ranges and interesting weaves. Also special colors and designs to your specifications. Excellent group of casements for contract and institutional interiors. Write for swatched brochure. Scalamandré.

(131) Scalamandré Wallcoverings. Large collection of wallcoverings — includes grasses, reds, corks, linens, foils and novelty textures. Write for swatched brochure. Scalamandré.

(132) Scandiline Furniture offers for \$1.00 a 36-page catalog "Scandinavian at its Best". Many new items in the residential line are pictured as are those in the new office furniture division. The design-awarded, hand-printed Swedish lampshades for ceiling and wall hanging lamps are detailed. Price lists available. Scandiline Furniture, Inc.

(133) Scandiline Pega Wall System is the ultimate answer for any storage or service requirements. Unlimited combinations can be designed. The system is available either wall hung or free standing with 12 alternate leg heights. This patented construction, designed by Ib. Juul Kristensen, is imported from Norway by Scandiline Furniture, Inc.

(134) Service to the architects for projects in their areas to establish tentative load and service needs for exterior and interior artificial lighting to meet I.E.S. Standards, adequate electric space heating and air conditioning, and electric cooking and water heating. Southern California Edison Company.

(135) Appliances — New illustrated, full-color brochures with complete specifications on built-ins by Thermador: ovens, cook tops, accessories and dishwasher. Also electric heating for home, office, factory, apartment, hotels and schools, and the Thermador glass-lined electric water heaters. Thermador.

(136) Unique high fidelity loudspeaker systems in the form of elegant lamps and end tables are described in brochures available free from Acoustica Associates, Inc. Fully illustrated literature gives technical specifications, dimensions, prices, etc. on these decorator-designed lamp-speakers which are now available in 16 different colors and styles. The attractive lamps come in table and hanging models and feature a cylindrical electrostatic loudspeaker which is also the translucent lampshade. Unlike conventional directional speakers, the lamp-speakers and table-speakers both radiate full frequency sound in a true 360° pattern throughout the room. Acoustica Associates, Inc.

(137) New Dimension In Ceramic Tiles. Brochure available to architects, explaining a new tile in the form of the Crown and Coronet which multiplies the possibilities for treatment of flat wall surfaces is announced by Redondo "True-size" Tile of Los Angeles. In this their Royal Line they present a flat tile but of such distinctive shape that it imparts the appearance of depth and contour to any wall—interior or exterior. Made in 4¼x8½ inch size the Crown and Coronet blends with the standard 4¼ square tiles to help architects and designers to create patterns of continuing attractiveness. For instance laid horizontally or vertically this tile imparts a convex or concave impression—and tends to accentuate or diminish the height of wall areas. Redondo Tile Co.



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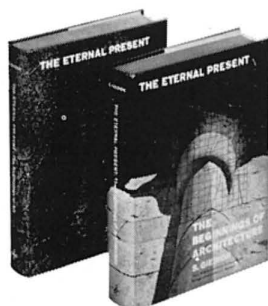




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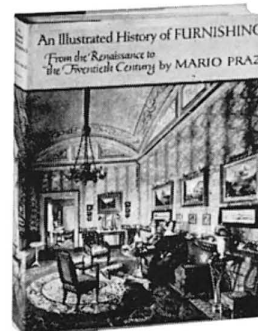
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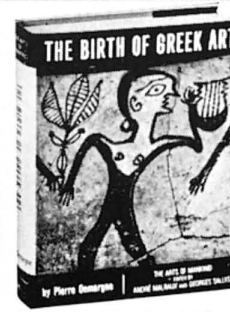
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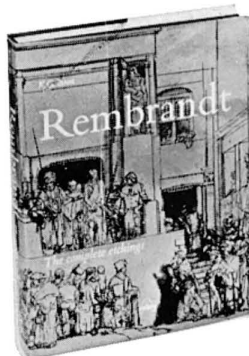
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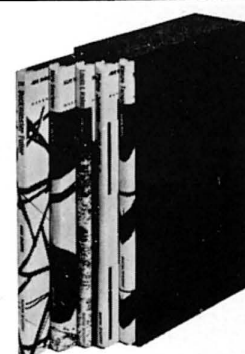
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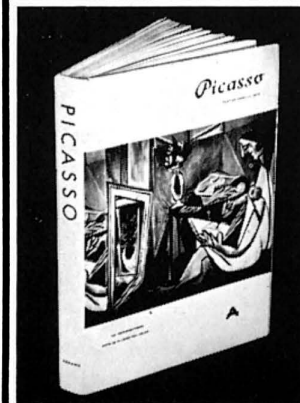
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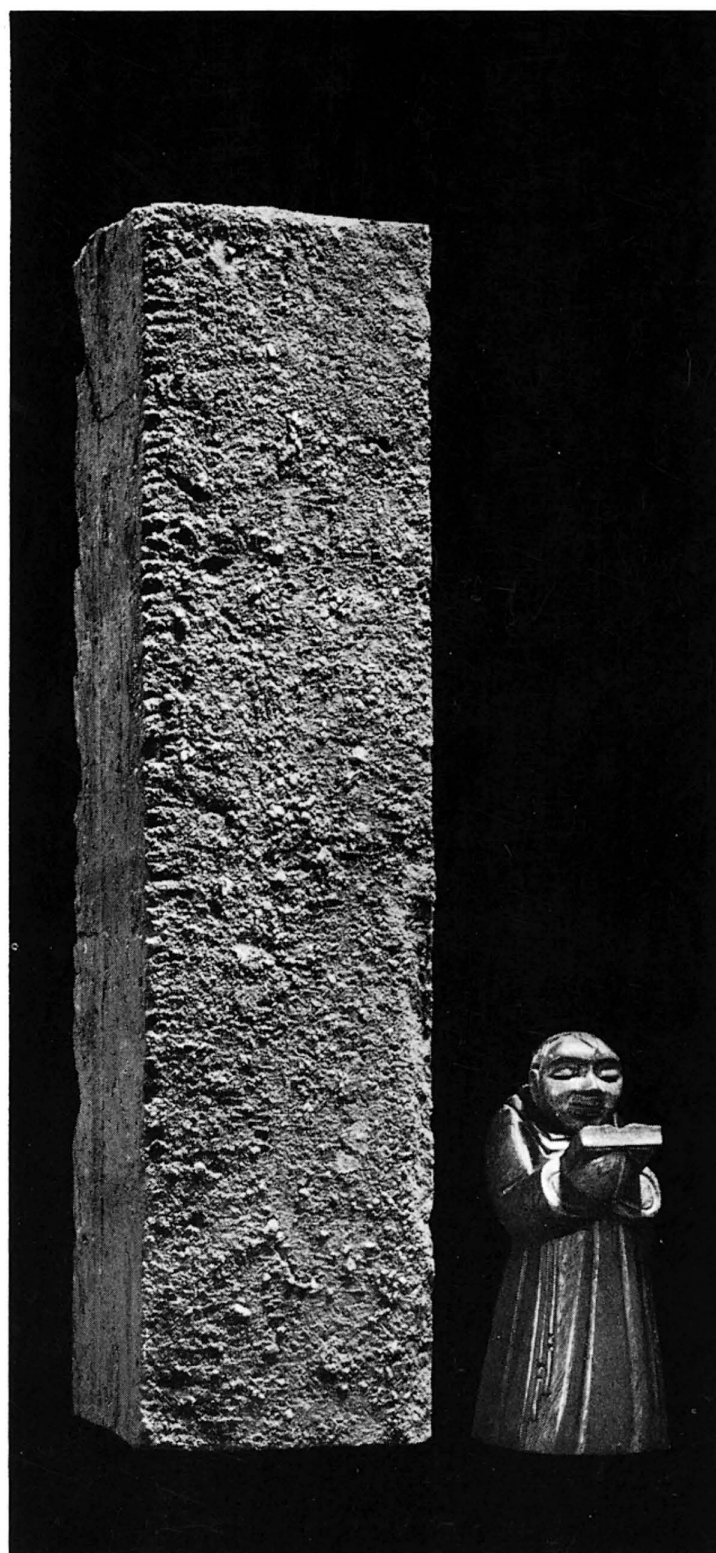
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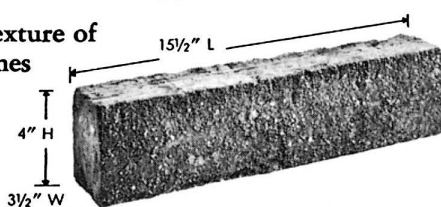


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